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Cura 468 SEQ list 0705
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Val Gln Thr Leu Gly Lys Thr Gly Thr Lys Ser Val Gln Thr Leu Pro 195 200 205

Pro Glu Asp Phe Cys Phe Tyr Gln Gly Ser Leu Arg Ser His Arg Asn Page 3

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Page 23

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Val Tyr Gly Glu Leu Met Arg Tyr Ala His Asp Leu Lys Thr Glu Arg 100 105 110

Lys Met His Leu Gln Glu Gly Arg Lys Ala Gln Gln Tyr Leu Asp Met 115 120 125

Cys Trp Lys Gln Met Gly Asn Ser Lys Lys Lys Phe Glu Arg Glu Cys 130 135 140

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Thr Asn Ala Thr Lys Ala Asp Val Glu Asn Ala Lys Gln Gln Leu Asn 165 170 175

Leu Arg Thr His Met Ala Asp Glu Asn Lys Asn Ala Tyr Ala Ala Gln 180 185 190

Leu Gln Asn Phe Asn Gly Glu Gln His Lys His Phe Tyr Val Val Ile 195 200 205

Pro Gln Ile Tyr Lys Gln Leu Gln Glu Met Asp Glu Arg Arg Thr Ile 210 215 220

Lys Leu Ser Glu Cys Tyr Arg Gly Phe Ala Asp Ser Glu Arg Lys Val 225 230 235 240

Ile Pro Ile Ile Ser Lys Cys Leu Glu Gly Met Ile Leu Ala Ala Lys 245 250 255

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Gln Leu Ser Pro Arg Leu Gly Gly Phe Leu Glu Glu Ala Trp Gln Pro 180 185 190

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Val Ser Leu Arg Cys Ser Glu Cys Gly Ala Arg Pro Leu Ala Ser Arg 210 215 220

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Gly Trp Gly His Thr His Pro Ser His Thr Tyr Ser Ser Asp Met Leu
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Ser Ala Glu Glu Ala Leu Leu Pro Ala Leu Pro Lys Thr Val Ser Phe 100 105 110
Arg Ile Asn Ser Glu Asp Phe Leu Leu Glu Ala Gln Val Arg Asp Gln 115 120 125
Pro Arg Trp Leu Leu Val Cys His Glu Gly Trp Ser Pro Ala Leu Gly 130 135 140
Leu Gln Ile Cys Trp Ser Leu Gly His Leu Arg Leu Thr His His Lys
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<213> Homo sapiens

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Gln His Asp Gly Lys Glu Asn Asp Cys Glu Pro Val Gly Arg His Pro 405 410 415 Tyr Ile Met Ser Arg Gln Leu Gln Tyr Asp Pro Thr Pro Leu Thr Trp 420 425 430 Ser Lys Cys Ser Glu Glu Tyr Ile Thr Arg Phe Leu Asp Arg Gly Trp 435 440 445 Gly Phe Cys Leu Asp Asp Ile Pro Lys Lys Gly Leu Lys Ser Lys 450 460 Val Ile Ala Pro Gly Val Ile Tyr Asp Val His His Gln Cys Gln Leu 465 470 475 480 Gln Tyr Gly Pro Asn Ala Thr Phe Cys Gln Glu Val Glu Asn Val Cys 485 490 495 Gln Thr Leu Trp Cys Ser Val Lys Gly Phe Cys Arg Ser Lys Leu Asp 500 505 510Ala Ala Ala Asp Gly Thr Gln Cys Gly Glu Lys Lys Trp Cys Met Ala 515 520 525 Gly Lys Cys Ile Thr Val Gly Lys Lys Pro Glu Ser Ile Pro Gly Gly 530 535 540 Trp Gly Arg Trp Ser Pro Trp Ser His Cys Ser Arg Thr Cys Gly Ala 545 550 555 560 Gly Val Gln Ser Ala Glu Arg Leu Cys Asn Asn Pro Glu Pro Lys Phe 565 570 575 Gly Gly Lys Tyr Cys Thr Gly Glu Arg Lys Arg Tyr Arg Leu Cys Asn 580 590 Val His Pro Cys Arg Ser Glu Ala Pro Thr Phe Arg Gln Met Gln Cys 595 605 Ser Glu Phe Asp Thr Val Pro Tyr Lys Asn Glu Leu Tyr His Trp Phe 610 620 Pro Ile Phe Asn Pro Ala His Pro Cys Glu Leu Tyr Cys Arg Pro Ile 625 630 635 640 Asp Gly Gln Phe Ser Glu Lys Met Leu Asp Ala Val Ile Asp Gly Thr 645 650 655 Pro Cys Phe Glu Gly Gly Asn Ser Arg Asn Val Cys Ile Asn Gly Ile 660 665 670Cys Lys Met Val Gly Cys Asp Tyr Glu Ile Asp Ser Asn Ala Thr Glu 675 680 685 Asp Arg Cys Gly Val Cys Leu Gly Asp Gly Ser Ser Cys Gln Thr Val 690 695 700 Arg Lys Met Phe Lys Gln Lys Glu Gly Ser Gly Tyr Val Asp Ile Gly 705 710 715 720 Leu Ile Pro Lys Gly Ala Arg Asp Ile Arg Val Met Glu Ile Glu Gly 725 730 735

Ala Gly Asn Phe Leu Ala Ile Arg Ser Glu Asp Pro Glu Lys Tyr Tyr 740 745 750 Leu Asn Gly Gly Phe Ile Ile Gln Trp Asn Gly Asn Tyr Lys Leu Ala 755 760 765 Gly Thr Val Phe Gln Tyr Asp Arg Lys Gly Asp Leu Glu Lys Leu Met 770 780 Ala Thr Gly Pro Thr Asn Glu Ser Val Trp Ile Gln Leu Leu Phe Gln 785 790 795 800 Val Thr Asn Pro Gly Ile Lys Tyr Glu Tyr Thr Ile Gln Lys Asp Gly 805 810 815 Leu Asp Asn Asp Val Glu Gln Met Tyr Phe Trp Gln Tyr Gly His Trp 820 825 830 Thr Glu Cys Ser Val Thr Cys Gly Thr Gly Ile Arg Arg Gln Thr Ala 835 840 845 His Cys Ile Lys Lys Gly Arg Gly Met Val Lys Ala Thr Phe Cys Asp 850 855 860 Pro Glu Thr Gln Pro Asn Gly Arg Gln Lys Lys Cys His Glu Lys Ala 865 870 875 880 Cys Pro Pro Arg Trp Trp Ala Gly Glu Trp Glu Ala Cys Ser Ala Thr 885 890 895 Cys Gly Pro His Gly Glu Lys Lys Arg Thr Val Leu Cys Ile Gln Thr 900 905 910 Met Val Ser Asp Glu Gln Ala Leu Pro Pro Thr Asp Cys Gln His Leu 915 920 925 Leu Lys Pro Lys Thr Leu Leu Ser Cys Asn Arg Asp Ile Leu Cys Pro 930 935 940 Ser Asp Trp Thr Val Gly Asn Trp Ser Glu Cys Ser Val Ser Cys Gly 955 950 955 Gly Gly Val Arg Ile Arg Ser Val Thr Cys Ala Lys Asn His Asp Glu 965 970 975 Pro Cys Asp Val Thr Arg Lys Pro Asn Ser Arg Ala Leu Cys Gly Leu 980 985 990 Gln Gln Cys Pro Ser Ser Arg Arg Val Leu Lys Pro Asn Lys Gly Thr 995 1000 1005 Ile Ser Asn Gly Lys Asn Pro Pro Thr Leu Lys Pro Val Pro Pro Pro 1010 1020 Thr Ser Arg Pro Arg Met Leu Thr Thr Pro Thr Gly Pro Glu Ser Met 1025 1030 1035 1040Ser Thr Ser Thr Pro Ala Ile Ser Ser Pro Ser Pro Thr Thr Ala Ser 1045 1050 1055Lys Glu Gly Asp Leu Gly Gly Lys Gln Trp Gln Asp Ser Ser Thr Gln
1060 1065 1070

- Pro Glu Leu Ser Ser Arg Tyr Leu Ile Ser Thr Gly Ser Thr Ser Gln 1075 1080 1085
- Pro Ile Leu Thr Ser Gln Ser Leu Ser Ile Gln Pro Ser Glu Glu Asn 1090 1095 1100
- Val Ser Ser Ser Asp Thr Gly Pro Thr Ser Glu Gly Gly Leu Val Ala 1105 1110 1115 1120
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- Trp Pro Val Thr Pro Phe Tyr Asn Thr Leu Thr Lys Gly Pro Glu Met 1140 1145 1150
- Glu Ile His Ser Gly Ser Gly Glu Glu Arg Glu Gln Pro Glu Asp Lys 1155 1160 1165
- Asp Glu Ser Asn Pro Val Ile Trp Thr Lys Ile Arg Val Pro Gly Asn 1170 1175 1180
- Asp Ala Pro Val Glu Ser Thr Glu Met Pro Leu Ala Pro Pro Leu Thr 1185 1190 1195 1200
- Pro Asp Leu Ser Arg Glu Ser Trp Trp Pro Pro Phe Ser Thr Val Met 1205 1210 1215
- Glu Gly Leu Leu Pro Ser Gln Arg Pro Thr Thr Ser Glu Thr Gly Thr 1220 1225 1230
- Pro Arg Val Glu Gly Met Val Thr Glu Lys Pro Ala Asn Thr Leu Leu 1235 1240 1245
- Pro Leu Gly Gly Asp His Gln Pro Glu Pro Ser Gly Lys Thr Ala Asn 1250 1260
- Arg Asn His Leu Lys Leu Pro Asn Asn Met Asn Gln Thr Lys Ser Ser 1265 1270 1275 1280
- Glu Pro Val Leu Thr Glu Glu Asp Ala Thr Ser Leu Ile Thr Glu Gly 1285 1290 1295
- Phe Leu Leu Asn Ala Ser Asn Tyr Lys Gln Leu Thr Asn Gly His Gly 1300 1310
- Ser Ala His Trp Ile Val Gly Asn Trp Ser Glu Cys Ser Thr Thr Cys 1315 1320 1325
- Gly Leu Gly Ala Tyr Trp Lys Arg Val Glu Cys Thr Thr Gln Met Asp 1330 1340
- Ser Asp Cys Ala Ala Ile Gln Arg Pro Asp Pro Ala Lys Arg Cys His 1345 1350 1355 1360
- Leu Arg Pro Cys Ala Gly Trp Lys Val Gly Asn Trp Ser Lys Cys Ser 1365 1370 1375
- Arg Asn Cys Ser Gly Gly Phe Lys Ile Arg Glu Ile Gln Cys Val Asp 1380 1385 1390
- Ser Arg Asp His Arg Asn Leu Arg Pro Phe His Cys Gln Phe Leu Ala 1395 1400 1405

Gly Ile Pro Pro Pro Leu Ser Met Ser Cys Asn Pro Glu Pro Cys Glu 1415 1420

Ala Trp Gln Val Glu Pro Trp Ser Gln Cys Ser Arg Ser Cys Gly Gly 1425 1430 1435 1440

Gly Val Gln Glu Arg Gly Val Phe Cys Pro Gly Gly Leu Cys Asp Trp 1445 1450 1455

Thr Lys Arg Pro Thr Ser Thr Met Ser Cys Asn Glu His Leu Cys Cys 1465

His Trp Ala Thr Gly Asn Trp Asp Leu Cys Ser Thr Ser Cys Gly Gly 1475 1480 1485

Gly Phe Gln Lys Arg Ile Val Gln Cys Val Pro Ser Glu Gly Asn Lys

Thr Glu Asp Gln Asp Gln Cys Leu Cys Asp His Lys Pro Arg Pro Pro 1505 1510 1520

Glu Phe Lys Lys Cys Asn Gln Gln Ala Cys Lys Lys Ser Ala Asp Leu 1525 1530 1535

Leu Cys Thr Lys Asp Lys Leu Ser Ala Ser Phe Cys Gln Thr Leu Lys 1540 1545 1550

Ala Met Lys Lys Cys Ser Val Pro Thr Val Arg Ala Glu Cys Cys Phe 1555 1560 1565

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<213> Homo sapiens

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Pro Pro Pro Arg Gln Arg Gly Thr Gly Ala Thr Ala Glu Ser

Arg Leu Phe Tyr Lys Val Ala Ser Pro Ser Thr His Phe Leu Leu Asn 50 60

Leu Thr Arg Ser Ser Arg Leu Leu Ala Gly His Val Ser Val Glu Tyr 65 70 75 80

Trp Thr Arg Glu Gly Leu Ala Trp Gln Arg Ala Ala Arg Pro His Cys
85 90 95

Leu Tyr Ala Gly His Leu Gln Gly Gln Ala Ser Ser Ser His Val Ala Page 43

Ile Ser Thr Cys Gly Gly Leu His Gly Leu Ile Val Ala Asp Glu Glu 115 120 125 Glu Tyr Leu Ile Glu Pro Leu His Gly Gly Pro Lys Gly Ser Arg Ser 130 135 140 Pro Glu Glu Ser Gly Pro His Val Val Tyr Lys Arg Ser Ser Leu Arg 145 150 155 160 His Pro His Leu Asp Thr Ala Cys Gly Val Arg Asp Glu Lys Pro Trp 165 170 175 Lys Gly Arg Pro Trp Trp Leu Arg Thr Leu Lys Pro Pro Pro Ala Arg 180 185 190 Pro Leu Gly Asn Glu Thr Glu Arg Gly Gln Pro Gly Leu Lys Arg Ser 195 200 205 Ser Arg Glu Arg Tyr Val Glu Thr Leu Val Val Ala Asp Lys Met 210 215 220 Met Val Ala Tyr His Gly Arg Arg Asp Val Glu Gln Tyr Val Leu Ala 225 230 235 240 Ile Met Asn Ile Val Ala Lys Leu Phe Gln Asp Ser Ser Leu Gly Ser 245 250 255 Thr Val Asn Ile Leu Val Thr Arg Leu Ile Leu Leu Thr Glu Asp Gln 265 270 Pro Thr Leu Glu Ile Thr His His Ala Gly Lys Ser Leu Asp Ser Phe 275 280 285 Cys Lys Trp Gln Lys Ser Ile Val Asn His Ser Gly His Gly Asn Ala 290 295 300 Ile Pro Glu Asn Gly Val Ala Asn His Asp Thr Ala Val Leu Ile Thr 305 310 315 320 Arg Tyr Asp Ile Cys Ile Tyr Lys Asn Lys Pro Cys Gly Thr Leu Gly 325 330 335 Leu Ala Pro Val Gly Gly Met Cys Glu Arg Glu Arg Ser Cys Ser Val 340 345 350 Asn Glu Asp Ile Gly Leu Pro Gln Ala Phe Thr Ile Ala His Glu Ile 355 360 365 Gly His Thr Phe Gly Met Asn His Asp Gly Val Gly Asn Ser Cys Gly 370 375 380 Ala Arg Gly Gln Asp Pro Ala Lys Leu Met Ala Ala His Ile Thr Met 385 390 395 400 Lys Thr Asn Pro Phe Val Trp Ser Ser Cys Asn Arg Asp Tyr Ile Thr 405 410 415 Ser Phe Leu Asp Ser Gly Leu Gly Leu Cys Leu Asn Asn Arg Pro Pro 420 425 430Arg Gln Asp Phe Val Tyr Pro Thr Val Ala Pro Gly Gln Ala Tyr Asp

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Ala Asp Glu Gln Cys Arg Phe Gln His Gly Val Lys Ser Arg Gln Cys 450 455 460 Lys Tyr Gly Glu Val Cys Ser Glu Leu Trp Cys Leu Ser Lys Ser Asn 465 470 475 480 Arg Cys Ile Thr Asn Ser Ile Pro Ala Ala Glu Gly Thr Leu Cys Gln 485 490 495 Thr His Thr Ile Asp Lys Gly Trp Cys Tyr Lys Arg Val Cys Val Pro 500 505 510 Phe Gly Ser Arg Pro Glu Gly Val Asp Gly Ala Trp Gly Pro Trp Thr 515 520 525 Pro Trp Gly Asp Cys Ser Arg Thr Cys Gly Gly Gly Val Ser Ser Ser 530 540 Ser Arg His Cys Asp Ser Pro Arg Pro Thr Ile Gly Gly Lys Tyr Cys 545 550 555 560 Leu Gly Glu Arg Arg Arg His Arg Ser Cys Asn Thr Asp Asp Cys Pro 565 570 575 Pro Gly Ser Gln Asp Phe Arg Glu Val Gln Cys Ser Glu Phe Asp Ser 580 585 590 Ile Pro Phe Arg Gly Lys Phe Tyr Lys Trp Lys Thr Tyr Arg Gly Gly 595 600 605 Gly Val Lys Ala Cys Ser Leu Thr Ser Leu Ala Glu Gly Phe Asn Phe 610 620 Tyr Thr Glu Arg Ala Ala Ala Val Val Asp Gly Thr Pro Cys Arg Pro 625 630 635 640 Asp Thr Val Asp Ile Cys Val Ser Gly Glu Cys Lys His Val Gly Cys 645 650 655 Asp Arg Val Leu Gly Ser Asp Leu Arg Glu Asp Lys Cys Arg Val Cys 660 665 670 Gly Gly Asp Gly Ser Ala Cys Glu Thr Ile Glu Gly Val Phe Ser Pro 675 680 685 Ala Ser Pro Gly Ala Gly Tyr Glu Asp Val Val Trp Ile Pro Lys Gly 690 695 700 Ser Val His Ile Phe Ile Gln Asp Leu Asn Leu Ser Leu Ser His Leu 705 710 715 720 Ala Leu Lys Gly Asp Gln Glu Ser Leu Leu Leu Glu Gly Leu Pro Gly 725 730 735 Thr Pro Gln Pro His Arg Leu Pro Leu Ala Gly Thr Thr Phe Gln Leu 740 745 750 Arg Gln Gly Pro Asp Gln Val Gln Ser Leu Glu Ala Leu Gly Pro Ile 755 760 765 Asn Ala Ser Leu Ile Val Met Val Leu Ala Arg Thr Glu Leu Pro Ala Page 45

Leu Arg Tyr Arg Phe Asn Ala Pro Ile Ala Arg Asp Ser Leu Pro Pro 785 790 800 Tyr Ser Trp His Tyr Ala Pro Trp Thr Lys Cys Ser Ala Gln Cys Ala 805 810 815 Gly Gly Ser Gln Val Gln Ala Val Glu Cys Arg Asn Gln Leu Asp Ser 820 825 830 Ser Ala Val Ala Pro His Tyr Cys Ser Ala His Ser Lys Leu Pro Lys 835 840 845 Arg Gln Arg Ala Cys Asn Thr Glu Pro Cys Pro Pro Asp Trp Val Val 850 855 860 Gly Asn Trp Ser Leu Cys Ser Arg Ser Cys Asp Ala Gly Val Arg Ser 865 870 875 880 Arg Ser Val Val Cys Gln Arg Arg Val Ser Ala Ala Glu Glu Lys Ala 885 890 895 Leu Asp Asp Ser Ala Cys Pro Gln Pro Arg Pro Pro Val Leu Glu Ala .900 905 910 Cys His Gly Pro Thr Cys Pro Pro Glu Trp Ala Ala Leu Asp Trp Ser 915 920 925 Glu Cys Thr Pro Ser Cys Gly Pro Gly Leu Arg His Arg Val Val Leu 930 935 940 Cys Lys Ser Ala Asp His Arg Ala Thr Leu Pro Pro Ala His Cys Ser 945 950 955 960 Pro Ala Ala Lys Pro Pro Ala Thr Met Arg Cys Asn Leu Arg Arg Cys 965 970 975 Pro Pro Ala Arg Trp Val Ala Gly Glu Trp Gly Glu Cys Ser Ala Gln 980 985 990 Cys Gly Val Gly Gln Arg Gln Arg Ser Val Arg Cys Thr Ser His Thr 995 1000 1005 Gly Gln Ala Ser His Glu Cys Thr Glu Ala Leu Arg Pro Pro Thr Thr 1010 1015 1020 Gln Gln Cys Glu Ala Lys Cys Asp Ser Pro Thr Pro Gly Asp Gly Pro 1025 1030 1035 1040 Glu Glu Cys Lys Asp Val Asn Lys Val Ala Tyr Cys Pro Leu Val Leu 1045 1050 1055 Lys Phe Gln Phe Cys Ser Arg Ala Tyr Phe Arg Gln Met Cys Cys Lys 1060 1065 1070Thr Cys Gln Gly His 1075

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35 40 45 Val Arg Val Asp Ala Gly Gly Ser Phe Leu Ser Tyr Glu Leu Trp Pro
50 60 Arg Ala Leu Arg Lys Arg Asp Val Ser Val Arg Arg Asp Ala Pro Ala 65 70 75 80 Phe Tyr Glu Leu Gln Tyr Arg Gly Arg Glu Leu Arg Phe Asn Leu Thr 85 90 95 Ala Asn Gln His Leu Leu Ala Pro Gly Phe Val Ser Glu Thr Arg Arg 100 105 110Arg Gly Gly Leu Gly Arg Ala His Ile Arg Ala His Thr Pro Ala Cys 115 120 125 His Leu Leu Gly Glu Val Gln Asp Pro Glu Leu Glu Gly Gly Leu Ala 130 135 140 Ala Ile Ser Ala Cys Asp Gly Leu Lys Gly Val Phe Gln Leu Ser Asn 145 150 155 160 Glu Asp Tyr Phe Ile Glu Pro Leu Asp Ser Ala Pro Ala Arg Pro Gly 165 170 175 His Ala Gln Pro His Val Val Tyr Lys Arg Gln Ala Pro Glu Arg Leu 180 185 190 Ala Gln Arg Gly Asp Ser Ser Ala Pro Ser Thr Cys Gly Val Gln Val 195 200 205 Tyr Pro Glu Leu Glu Ser Arg Arg Glu Arg Trp Glu Gln Arg Gln Gln 210 215 220 Trp Arg Arg Pro Arg Leu Arg Arg Leu His Gln Arg Ser Val Ser Lys 235 230 235 Glu Lys Trp Val Glu Thr Leu Val Val Ala Asp Ala Lys Met Val Glu 245 250 . 255 Tyr His Gly Gln Pro Gln Val Glu Ser Tyr Val Leu Thr Ile Met Asn 260 265 270 Met Val Ala Gly Leu Phe His Asp Pro Ser Ile Gly Asn Pro Ile His 275 280 285 Ile Thr Ile Val Arg Leu Val Leu Leu Glu Asp Glu Glu Glu Asp Leu 290 295 300 Lys Ile Thr His His Ala Asp Asn Thr Leu Lys Ser Phe Cys Lys Trp 305 310 315 320

Cura 468 SEQ list 0705 Gln Lys Ser Ile Asn Met Lys Gly Asp Ala His Pro Leu His His Asp 325 330 335 Thr Ala Ile Leu Leu Thr Arg Lys Asp Leu Cys Ala Ala Met Asn Arg 340 345 350Pro Cys Glu Thr Leu Gly Leu Ser His Val Ala Gly Met Cys Gln Pro 355 360 365 His Arg Ser Cys Ser Ile Asn Glu Asp Thr Gly Leu Pro Leu Ala Phe 370 375 380 Thr Val Ala His Glu Leu Gly His Ser Phe Gly Ile Gln His Asp Gly 385 390 395 400 Ser Gly Asn Asp Cys Glu Pro Val Gly Lys Arg Pro Phe Ile Met Ser 405 410 415 Pro Gln Leu Leu Tyr Asp Ala Ala Pro Leu Thr Trp Ser Arg Cys Ser 420 425 430 Arg Gln Tyr Ile Thr Arg Phe Leu Asp Arg Gly Trp Gly Leu Cys Leu 435 440 445 Asp Asp Pro Pro Ala Lys Asp Ile Ile Asp Phe Pro Ser Val Pro Pro 450 455 460 Gly Val Leu Tyr Asp Val Ser His Gln Cys Arg Leu Gln Tyr Gly Ala 465 470 475 480 Tyr Ser Ala Phe Cys Glu Asp Met Asp Asn Val Cys His Thr Leu Trp 485 490 495 Cys Ser Val Gly Thr Thr Cys His Ser Lys Leu Asp Ala Ala Val Asp 500 510 Gly Thr Arg Cys Gly Glu Asn Lys Trp Cys Leu Ser Gly Glu Cys Val 515 520 525 Pro Val Gly Phe Arg Pro Glu Ala Val Asp Gly Gly Trp Ser Gly Trp 530 535 540 Ser Ala Trp Ser Ile Cys Ser Arg Ser Cys Gly Met Gly Val Gln Ser 545 550 555 560 Ala Glu Arg Gln Cys Thr Gln Pro Thr Pro Lys Tyr Lys Gly Arg Tyr 565 570 575 Cys Val Gly Glu Arg Lys Arg Phe Arg Leu Cys Asn Leu Gln Ala Cys 580 585 590 Pro Ala Gly Arg Pro Ser Phe Arg His Val Gln Cys Ser His Phe Asp 595 605 Ala Met Leu Tyr Lys Gly Gln Leu His Thr Trp Val Pro Val Val Asn 610 620 Asp Val Asn Pro Cys Glu Leu His Cys Arg Pro Ala Asn Glu Tyr Phe 625 630 635 640 Ala Lys Lys Leu Arg Asp Ala Val Val Asp Gly Thr Pro Cys Tyr Gln
645 650 655

Cura 468 SEQ list 0705

Val Arg Ala Ser Arg Asp Leu Cys Ile Asn Gly Ile Cys Lys Asn Val
660 665 670 Gly Cys Asp Phe Glu Ile Asp Ser Gly Ala Met Glu Asp Arg Cys Gly 675 680 685 Val Cys His Gly Asn Gly Ser Thr Cys His Thr Val Ser Gly Thr Phe 690 695 700 Glu Glu Ala Glu Gly Leu Gly Tyr Val Asp Val Gly Leu Ile Pro Ala 705 710 715 720 Gly Ala Arg Glu Ile Arg Ile Gln Glu Val Ala Glu Ala Ala Asn Phe 725 730 735 Leu Ala Leu Arg Ser Glu Asp Pro Glu Lys Tyr Phe Leu Asn Gly Gly 740 745 750 Trp Thr Ile Gln Trp Asn Gly Asp Tyr Gln Val Ala Gly Thr Thr Phe 755 760 765 Thr Tyr Ala Arg Arg Gly Asn Trp Glu Asn Leu Thr Ser Pro Gly Pro 770 780 Thr Lys Glu Pro Val Trp Ile Gln Val Pro Ala Ser Arg Gly Pro Gly 785 790 795 800 Gly Gly Ser Arg Gly Gly Val Pro Arg Pro Ser Thr Leu His Gly Arg 805 810 815 Ser Arg Pro Gly Gly Val Ser Pro Gly Ser Val Thr Glu Pro Gly Ser 820 825 830 Glu Pro Gly Pro Pro Ala Ala Ser Thr Ser Val Ser Pro Ser Leu 835 840 845 Lys Trp Pro Asn Leu Val Ala Ala Val His Arg Gly Gly Trp Gly Gln 850 855 860 Ala Pro Leu Gly Leu Gly Gly Trp Arg Arg His Leu Val Leu Met Gly 865 870 875 880 Pro Arg Leu Pro Thr Gln Leu Leu Phe Gln Glu Ser Asn Pro Gly Val 885 890 895 His Tyr Glu Tyr Thr Ile His Arg Glu Ala Gly Gly His Asp Glu Val 900 905 910 Pro Pro Pro Val Phe Ser Trp His Tyr Gly Pro Trp Thr Lys Cys Thr 915 920 925 Val Thr Cys Gly Arg Gly Glu Lys Trp Gly Arg His Ser Pro Thr Cys 930 935 940 Arg Gly Leu Val Ser Gly Gln Gly His Trp Leu Gln Leu Pro Ala His 945 950 955 960 Cys Trp Ala Thr Thr Gly Leu Glu Val Cys Phe Ser Glu Pro Gln Phe 965 970 975 Ser Ile Cys Glu Met Arg Leu Ala Ile Ala Leu Cys Pro Arg Pro Ala 980 985 990

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Pro Phe Gly Ser Arg Pro Glu Gly Val Asp Gly Ala Trp Gly Pro Trp 290 295 300 Thr Pro Trp Gly Asp Cys Ser Arg Thr Cys Gly Gly Gly Val Ser Ser 305 . 310 315 320 Ser Ser Arg His Cys Asp Ser Pro Arg Pro Thr Ile Gly Gly Lys Tyr 325 330 335 Cys Leu Gly Glu Arg Arg Arg His Arg Ser Cys Asn Thr Asp Asp Cys 340 345 350 Pro Pro Gly Ser Gln Asp Phe Arg Glu Val Gln Cys Ser Glu Phe Asp 355 360 365 Ser Ile Pro Phe Arg Gly Lys Phe Tyr Lys Trp Lys Thr Tyr Arg Gly 370 375 380Gly Gly Val Lys Ala Cys Ser Leu Thr Cys Leu Ala Glu Gly Phe Asn 385 390 395 400 Phe Tyr Thr Glu Arg Ala Ala Ala Val Val Asp Gly Thr Pro Cys Arg 405 410 415 Pro Asp Thr Val Asp Ile Cys Val Ser Gly Glu Cys Lys His Val Gly 420 425 430 Cys Asp Arg Val Leu Gly Ser Asp Leu Arg Glu Asp Lys Cys Arg Val 435 440 445 Cys Gly Gly Asp Gly Ser Ala Cys Glu Thr Ile Glu Gly Val Phe Ser 450 455 460 Pro Ala Ser Pro Gly Ala Gly Tyr Glu Asp Val Val Trp Ile Pro Lys 465 470 475 480 Gly Ser Val His Ile Phe Ile Gln Asp Leu Asn Leu Ser Leu Ser His 485 490 495 Leu Ala Leu Lys Gly Asp Gln Glu Ser Leu Leu Glu Gly Leu Pro 500 505 510 Gly Thr Pro Gln Pro His Arg Leu Pro Leu Ala Gly Thr Thr Phe Gln 515 520 525 Leu Arg Gln Gly Pro Asp Gln Val Gln Ser Leu Glu Ala Leu Gly Pro 530 535 540 Ile Asn Ala Ser Leu Ile Val Met Val Leu Ala Arg Thr Glu Leu Pro 545 550 555 560 Ala Leu Arg Tyr Arg Phe Asn Ala Pro Ile Ala Arg Asp Ser Leu Pro 565 570 575 Pro Tyr Ser Trp His Tyr Ala Pro Trp Thr Lys Cys Ser Ala Gln Cys 580 585 590 Ala Gly Gly Ser Gln Val Gln Ala Val Glu Cys Arg Asn Gln Leu Asp 595 600 605 Ser Ser Ala Val Ala Pro His Tyr Cys Ser Ala His Ser Lys Leu Pro 610 620

Lys Arg Gln Arg Ala Cys Asn Thr Glu Pro Cys Pro Asp Trp Val 625 630 635 640 Val Gly Asn Trp Ser Leu Cys Ser Arg Ser Cys Asp Ala Gly Val Arg 645 650 655 Ser Arg Ser Val Val Cys Gln Arg Arg Val Ser Ala Ala Glu Glu Lys 660 665 670 Ala Leu Asp Asp Ser Ala Cys Pro Gln Pro Arg Pro Pro Val Leu Glu 675 680 685 Ala Cys His Gly Pro Thr Cys Pro Pro Glu Trp Ala Ala Leu Asp Trp 690 695 700 Ser Glu Cys Thr Pro Ser Cys Gly Pro Gly Leu Arg His Arg Val Val 705 710 715 720 Leu Cys Lys Ser Ala Asp His Arg Ala Thr Leu Pro Pro Ala His Cys 725 730 735 Ser Pro Ala Ala Lys Pro Pro Ala Thr Met Arg Cys Asn Leu Arg Arg 740 745 750 Cys Pro Pro Ala Arg Trp Val Ala Gly Glu Trp Gly Glu Cys Ser Ala 755 760 765 Gln Cys Gly Val Gly Gln Arg Gln Arg Ser Val Arg Cys Thr Ser His 770 780 Thr Gly Gln Ala Ser His Glu Cys Thr Glu Ala Leu Arg Pro Pro Thr 785 790 795 800 Thr Gln Gln Cys Glu Ala Lys Cys Asp Ser Pro Thr Pro Gly Asp Gly 805 810 815 Pro Glu Glu Cys Lys Asp Val Asn Lys Val Ala Tyr Cys Pro Leu Val 820 825 830 Leu Lys Phe Gln Phe Cys Ser Arg Ala Tyr Phe Arg Gln Met Cys Cys 835 840 845 Lys Thr Cys His Gly His 850

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<213> Homo sapiens

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20 25 30

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Cys Gly Thr Leu Gly Leu Ala Ser Val Ala Gly Met Cys Glu Pro Glu 370 375 380 Arg Ser Cys Ser Ile Asn Glu Asp Ile Gly Leu Gly Ser Ala Phe Thr 385 390 395 400 Ile Ala His Glu Ile Val His Asn Phe Gly Met Asn His Asp Gly Ile 405 410 415 Gly Asn Ser Cys Gly Arg Lys Val Met Lys Gln Gln Asn Tyr Gly Ser 420 425 430 Ser His Tyr Cys Glu Tyr Gln Ser Phe Phe Leu Val Cys Leu Gln Ser 435 440 445 Arg Xaa His His Gln Leu Phe Arg Glu Val Cys Arg Glu Leu Trp Cys 450 460 Leu Ser Lys Ser Asn Arg Cys Val Thr Asn Ser Ile Pro Ala Ala Glu 465 470 475 480 Gly Thr Leu Cys Gln Thr Gly Asn Ile Glu Lys Gly Trp Cys Tyr Gln 485 490 495 Gly Asp Cys Val Pro Phe Gly Thr Trp Pro Gln Ser Ile Asp Gly Gly 500 505 510 Trp Gly Pro Trp Ser Leu Trp Gly Glu Cys Ser Arg Thr Cys Gly Gly 515 525 Gly Val Ser Ser Ser Leu Arg His Cys Asp Ser Pro Ala Pro Ser Gly 530 540 Gly Gly Lys Tyr Cys Leu Gly Glu Arg Lys Arg Tyr Arg Ser Cys Asn 545 550 560 Thr Asp Pro Cys Pro Leu Gly Ser Arg Asp Phe Arg Glu Lys Gln Cys 565 570 575 Ala Asp Phe Asp Asn Met Pro Phe Arg Gly Lys Tyr Tyr Asn Trp Lys 580 585 590 Pro Tyr Thr Gly Gly Gly Val Lys Pro Cys Ala Leu Asn Cys Leu Ala 595 600 605 Glu Gly Tyr Asn Phe Tyr Thr Glu Arg Ala Pro Ala Val Ile Asp Gly 610 620 Thr Gln Cys Asn Ala Asp Ser Leu Asp Ile Cys Ile Asn Gly Glu Cys 625 630 635 640 Lys His Val Gly Cys Asp Asn Ile Leu Gly Ser Asp Ala Arg Glu Asp 645 650 655 Arg Cys Arg Val Cys Gly Gly Gly Ser Thr Cys Asp Ala Ile Glu 660 665 670 Gly Phe Phe Asn Asp Ser Leu Pro Arg Gly Gly Tyr Met Glu Val Val 675 680 685 Gln Ile Pro Arg Gly Ser Val His Ile Glu Val Arg Glu Val Ala Met 690 695 700 Page 54

 Ser Lys
 Asn Tyr
 Ile Ala Leu Lys
 Ser Glu Gly Gly Asp Asp Tyr
 Tyr Tyr Ile 720

 Asn Gly Ala Trp Thr Thr Ile Asp Trp Pro Gry 730
 Lys Phe Asp Val Ala Gly 735
 Gly 735
 Gly 735

 Thr Ala Phe His Tyr Lys Arg Pro Thr Asp Glu Pro Glu Ser Leu Glu 750
 Leu Glu 755
 Leu Glu 760
 Leu Ile Val Met Val Leu Leu Glu 760
 Leu Glu 760

 Ala Leu Gly Pro Thr Ser Glu Asp Asp Tyr Lys Phe Asn Val Pro Ile Thr Arg 770
 Asp Asp Asp Glu Val Gly Phe Thr Trp Asp His Gln Pro 800
 Trp Ser Glu Cys Ser Ala Thr Cys Ala Gly Phe Thr Trp Asp His Gln Pro 815
 Gln Pro Thr Gln Arg Ala Arg Trp Arg 810
 Gly Lys Met Pro Thr 815
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 Thr Lys His Ile Leu Ser Cys Arg Phe 830
 Ser Tyr 830
 Arg Phe 845
 Arg Phe

<400> 35

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Ser Ala Lys Tyr Asp Val Glu Asn Cys Leu Ala Asn Lys Val Asp Leu 20 25 30

Ser Phe Ser Pro Ser Gln Ser Leu Pro Ala Ser His Ala His Leu Arg 35 40 45

Val Thr Ala Ala Pro Gln Ser Val Cys Ala Leu Arg Ala Val Asp Gln 50 60

Ser Val Leu Leu Met Lys Pro Asp Ala Glu Leu Ser Ala Ser Ser Val 65 70 75 80

Tyr Asn Leu Leu Pro Glu Lys Asp Leu Thr Gly Phe Pro Gly Pro Leu 85 90 95

Asn Asp Gln Asp Asn Glu Asp Cys Ile Asn Arg His Asn Val Tyr Ile $100 \hspace{1cm} 105 \hspace{1cm} 110$

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Tyr Ser Phe Leu Glu Asp Met Gly Leu Lys Ala Phe Thr Asn Ser Lys Page 55

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<213> Homo sapiens

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480

Lys His Tyr Asp Gly Ser Tyr Ser Thr Phe Gly Glu Arg Tyr Gly Arg 485 490 495 Asn Gln Gly Asn Thr Trp Leu Thr Ala Phe Val Leu Lys Thr Phe Ala 500 505 510 Gln Ala Arg Ala Tyr Ile Phe Ile Asp Glu Ala His Ile Thr Gln Ala 515 520 525 Leu Ile Trp Leu Ser Gln Arg Gln Lys Asp Asn Gly Cys Phe Arg Ser 530 540 Ser Gly Ser Leu Leu Asn Asn Ala Ile Lys Gly Gly Val Glu Asp Glu 545 550 555 560 Val Thr Leu Ser Ala Tyr Ile Thr Ile Ala Leu Leu Glu Ile Pro Leu 565 570 575 Thr Val Thr His Pro Val Val Arg Asn Ala Leu Phe Cys Leu Glu Ser 580 585 590 Ala Trp Lys Thr Ala Gln Glu Gly Asp His Gly Ser His Val Tyr Thr 595 600 605 Ala Leu Leu Ala Tyr Ala Phe Ala Leu Ala Gly Asn Gln Asp Lys 610 620 Arg Lys Glu Val Leu Lys Ser Leu Asn Glu Glu Ala Val Lys Lys Asp 625 630 635 640 Asn Ser Val His Trp Glu Arg Pro Gln Lys Pro Lys Ala Pro Val Gly 645 650 655 His Phe Tyr Glu Pro Gln Ala Pro Ser Ala Glu Val Glu Met Thr Ser 660 665 670 Tyr Val Leu Leu Ala Tyr Leu Thr Ala Gln Pro Ala Pro Thr Ser Glu 675 680 685 Asp Leu Thr Ser Ala Thr Asn Ile Val Lys Trp Ile Thr Lys Gln Gln 690 695 700 Asn Ala Gln Gly Gly Phe Ser Ser Thr Gln Asp Thr Val Val Ala Leu 705 710 715 720 His Ala Leu Ser Lys Tyr Gly Ala Ala Thr Phe Thr Arg Thr Gly Lys 735 730 735 Ala Ala Gln Val Thr Ile Gln Ser Ser Gly Thr Phe Ser Ser Lys Phe 740 750Gln Val Asp Asn Asn Asn Arg Leu Leu Gln Gln Val Ser Leu Pro 755 760 765 Glu Leu Pro Gly Glu Tyr Ser Met Lys Val Thr Gly Glu Gly Cys Val 770 775 780 Tyr Leu Gln Thr Ser Leu Lys Tyr Asn Ile Leu Pro Glu Lys Glu Glu 785 790 795 800 Phe Pro Phe Ala Leu Gly Val Gln Thr Leu Pro Gln Thr Cys Asp Glu

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Cura 468 SEQ list 0705 810 81

Pro Lys Ala His Thr Ser Phe Gln Ile Ser Leu Ser Val Ser Tyr Thr Sly Ser Arg Ser Ala Ser Asn Met Ala Ile Val Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr Val Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr Glu Val Ser Ser Asn His Val Leu Ile Tyr 880 Leu Asp Lys Val Ser Asn Gln Thr Leu Ser Leu Phe Phe Thr Val Lys Ser Gln Asp Tyr Tyr Glu Thr Gly Glu Phe Phe Ala Ile Val Ile Val Lyr Ser Cys Ser Lys Asp Leu Gly Asp Asp Ala Ser Ash Ala Pro Ser Ser Ser Ash Ile Val Lys Val Tyr Asp Tyr Tyr Asp Leu Gly Asp Ala Ser Ash Ala Pro

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Val Thr Ala Ala Pro Gln Ser Val Cys Ala Leu Arg Ala Val Asp Gln
Ser Val Leu Leu Met Lys Pro Asp Ala Glu Leu Ser Ala Ser Ser Val
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Cyr Asn Leu Leu Pro Glu Lys Asp Leu Thr Gly Phe Pro Gly Pro Leu
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Asn Asp Gln Asp Asp Glu Asp Cys Ile Asn Arg His Asn Val Tyr Ile
Asn Gly Ile Thr Tyr Thr Pro Val Ser Ser Thr Asn Glu Lys Asp Met
125
Tyr Ser Phe Leu Glu Asp Met Gly Leu Lys Ala Phe Thr Asn Ser Lys
11e Arg Lys Glu Glu Pro His Thr Glu Thr Val Arg Lys Tyr Phe Pro
160

Cura 468 SEQ list 0705 Glu Thr Trp Ile Trp Asp Leu Val Val Val Asn Ser Ala Gly Val Ala 165 170 175 Glu Val Gly Val Thr Val Pro Asp Thr Ile Thr Glu Trp Lys Ala Gly 180 185 190 Ala Phe Cys Leu Ser Glu Asp Ala Gly Leu Gly Ile Ser Ser Thr Ala 195 200 205Ser Leu Arg Ala Phe Gln Pro Phe Phe Val Glu Leu Thr Met Pro Tyr 210 215 220 Ser Val Ile Arg Gly Glu Ala Phe Thr Leu Lys Ala Thr Val Leu Asn 225 230 235 240 Tyr Leu Pro Lys Cys Ile Arg Val Ser Val Gln Leu Glu Ala Ser Pro 245 250 255 Ala Phe Leu Ala Val Pro Val Glu Lys Glu Gln Ala Pro His Cys Ile 260 265 270 Cys Ala Asn Gly Arg Gln Thr Val Ser Trp Ala Val Thr Pro Lys Ser 275 280 285 Leu Gly Asn Val Asn Phe Thr Val Ser Ala Glu Ala Leu Glu Ser Gln 290 295 300 Glu Leu Cys Gly Thr Glu Val Pro Ser Val Pro Glu His Gly Arg Lys 305 310 315 320 Asp Thr Val Ile Lys Pro Leu Leu Val Glu Pro Glu Gly Leu Glu Lys 325 330 335 Glu Thr Thr Phe Asn Ser Leu Leu Cys Pro Ser Gly Gly Glu Val Ser 340 345 350 Glu Glu Leu Ser Leu Lys Leu Pro Pro Asn Val Val Glu Glu Ser Ala 355 360 365 Arg Ala Ser Val Ser Val Leu Gly Asp Ile Leu Gly Ser Ala Met Gln 370 380 Asn Thr Gln Asn Leu Leu Gln Met Pro Tyr Gly Cys Gly Glu Gln Asn 385 390 395 400 Met Val Leu Phe Ala Pro Asn Ile Tyr Val Leu Asp Tyr Leu Asn Glu 405 410 415 Thr Gln Gln Leu Thr Pro Glu Val Lys Ser Lys Ala Ile Gly Tyr Leu 420 425 430 Asn Thr Gly Tyr Gln Arg Gln Leu Asn Tyr Lys His Tyr Asp Gly Ser 435 440 445 Tyr Ser Thr Phe Gly Glu Arg Tyr Gly Arg Asn Gln Gly Asn Thr Trp 450 455 460 Leu Thr Ala Phe Val Leu Lys Thr Phe Ala Gln Ala Arg Ala Tyr Ile 465 470 475 480 Phe Ile Asp Glu Ala His Ile Thr Gln Ala Leu Ile Trp Leu Ser Gln 485 490 495

Cura 468 SEQ list 0705 Arg Gln Lys Asp Asn Gly Cys Phe Arg Ser Ser Gly Ser Leu Leu Asn 500 510 Asn Ala Ile Lys Gly Gly Val Glu Asp Glu Val Thr Leu Ser Ala Tyr 515 520 525 Ile Thr Ile Ala Leu Leu Glu Ile Pro Leu Thr Val Thr His Pro Val 530 535 540 Val Arg Asn Ala Leu Phe Cys Leu Glu Ser Ala Trp Lys Thr Ala Gln 545 550 555 560 Glu Gly Asp His Gly Ser His Val Tyr Thr Lys Ala Leu Leu Ala Tyr 565 570 575 Ala Phe Ala Leu Ala Gly Asn Gln Asp Lys Arg Lys Glu Val Leu Lys 580 585 590 Ser Leu Asn Glu Glu Ala Val Lys Lys Asp Asn Ser Val His Trp Glu 595 600 605 Arg Pro Gln Lys Pro Lys Ala Pro Val Gly His Phe Tyr Glu Pro Gln 610 620 Ala Pro Ser Ala Glu Val Glu Met Thr Ser Tyr Val Leu Leu Ala Tyr 625 630 635 640 Leu Thr Ala Gln Pro Ala Pro Thr Ser Glu Asp Leu Thr Ser Ala Thr 645 650 655 Asn Ile Val Lys Trp Ile Thr Lys Gln Gln Asn Ala Gln Gly Gly Phe 660 665 670 Ser Ser Thr Gln Asp Thr Val Val Ala Leu His Ala Leu Ser Lys Tyr 675 680 685 Gly Ala Ala Thr Phe Thr Arg Thr Gly Lys Ala Ala Gln Val Thr Ile 690 695 700 Gln Ser Ser Gly Thr Phe Ser Ser Lys Phe Gln Val Asp Asn Asn 705 710 715 720 Arg Leu Leu Gln Gln Val Ser Leu Pro Glu Leu Pro Gly Glu Tyr 725 730 735 Ser Met Lys Val Thr Gly Glu Gly Cys Val Tyr Leu Gln Thr Ser Leu 740 745 750 Lys Tyr Asn Ile Leu Pro Glu Lys Glu Glu Phe Pro Phe Ala Leu Gly 755 760 765 Val Gln Thr Leu Pro Gln Thr Cys Asp Glu Pro Lys Ala His Thr Ser 770 775 780 Phe Gln Ile Ser Leu Ser Val Ser Tyr Thr Gly Ser Arg Ser Ala Ser 785 790 795 800 Asn Met Ala Ile Val Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu 805 810 815 Lys Pro Thr Val Lys Met Leu Glu Arg Ser Asn His Val Ser Arg Thr 820 825 830

Cura 468 SEQ list 0705 Glu Val Ser Ser Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn 835 840 845 Gln Thr Leu Ser Leu Phe Phe Thr Val Leu Gln Asp Val Pro Val Arg 850 855 860 Asp Leu Lys Pro Ala Ile Val Lys Val Tyr Asp Tyr Tyr Glu Thr Asp 865 870 875 880 Glu Phe Ala Ile Ala Glu Tyr Asn Ala Pro Cys Ser Lys Asp Leu Gly 885 890 895 Asn Ala

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Thr Glu Trp Lys Ala Gly Ala Phe Cys Leu Ser Glu Asp Ala Gly Leu 225 230 235 240 Gly Ile Ser Ser Thr Ala Ser Leu Arg Ala Phe Gln Pro Phe Phe Val 245 250 255 Glu Leu Thr Met Pro Tyr Ser Val Ile Arg Gly Glu Ala Phe Thr Leu 260 265 270 Lys Ala Thr Val Leu Asn Tyr Leu Pro Lys Cys Ile Arg Val Ser Val 275 280 285 Gln Leu Glu Ala Ser Pro Ala Phe Leu Ala Val Pro Val Glu Lys Glu 290 295 300 Gln Ala Pro His Cys Ile Cys Ala Asn Gly Arg Gln Thr Val Ser Trp 305 310 315 Ala Val Thr Pro Lys Ser Leu Gly Asn Val Asn Phe Thr Val Ser Ala 325 330 335 Glu Ala Leu Glu Ser Gln Glu Leu Cys Gly Thr Glu Val Pro Ser Val 340 350 Pro Glu His Gly Arg Lys Asp Thr Val Ile Lys Pro Leu Leu Val Glu 355 360 365 Pro Glu Gly Leu Glu Lys Glu Thr Thr Phe Asn Ser Leu Leu Cys Pro 370 375 380 Ser Gly Gly Glu Val Ser Glu Glu Leu Ser Leu Lys Leu Pro Pro Asn 385 390 395 400 Val Val Glu Glu Ser Ala Arg Ala Ser Val Ser Val Leu Gly Asp Ile 405 410 415 Leu Gly Ser Ala Met Gln Asn Thr Gln Asn Leu Leu Gln Met Pro Tyr 420 425 430 Gly Cys Gly Glu Glx Asn Met Val Leu Phe Ala Pro Asn Ile Tyr Val 435 440 445 Leu Asp Tyr Leu Asn Glu Thr Gln Gln Leu Thr Pro Glu Ile Lys Ser 450 455 460 Lys Ala Ile Gly Tyr Leu Asn Thr Gly Tyr Gln Arg Gln Leu Asn Tyr 465 470 475 480 Lys His Tyr Asp Gly Ser Tyr Ser Thr Phe Gly Glu Arg Tyr Gly Arg 485 490 495 Asn Gln Gly Asn Thr Trp Leu Thr Ala Phe Val Leu Lys Thr Phe Ala 500 510 Gln Ala Arg Ala Tyr Ile Phe Ile Asp Glu Ala His Ile Thr Gln Ala 515 520 525 Leu Ile Trp Leu Ser Gln Arg Gln Lys Asp Asn Gly Cys Phe Arg Ser 530 540 Ser Gly Ser Leu Leu Asn Asn Ala Ile Lys Gly Gly Val Glu Asp Glu 545 550 555 560 Page 62

Val Thr Leu Ser Ala Tyr Ile Lys Ile Ala Leu Leu Glu Ile Pro Leu 565 570 575 Thr Val Thr His Pro Val Val Arg Asn Ala Leu Phe Cys Leu Glu Ser 580 585 590 Ala Trp Lys Thr Ala Glu Glu Gly Asp His Gly Ser His Val Tyr Thr 595 600 605 Ala Leu Leu Ala Tyr Ala Phe Ala Leu Ala Gly Asn Gln Asp Lys 610 620 Arg Lys Glu Val Leu Lys Ser Leu Asn Glu Glu Ala Val Lys Lys Asp 625 630 635 640 Asn Ser Val His Trp Glu Arg Pro Gln Lys Pro Lys Ala Pro Val Gly 645 650 655 His Phe Tyr Glu Pro Gln Ala Pro Ser Ala Glu Val Glu Met Thr Ser 660 665 670 Tyr Val Leu Leu Ala Tyr Leu Thr Ala Gln Pro Ala Pro Thr Ser Glu 675 680 685 Asp Leu Thr Ser Ala Thr Asn Ile Val Lys Trp Ile Thr Lys Gln Gln 690 695 700 Asn Ala Gln Gly Gly Phe Ser Ser Thr Gln Asp Lys Val Val Ala Leu 705 710 715 720 His Ala Leu Ser Lys Tyr Gly Ala Ala Thr Phe Thr Arg Thr Gly Lys 725 730 735 Ala Ala Gln Val Thr Ile Gln Ser Ser Gly Thr Phe Ser Ser Lys Phe 740 745 750 Gln Val Asp Asn Asn Asn Arg Leu Leu Gln Gln Val Ser Leu Pro 755 760 765 Glu Leu Pro Gly Glu Tyr Ser Met Lys Val Thr Gly Glu Gly Cys Val 770 775 780 Tyr Leu Gln Thr Ser Leu Lys Tyr Asn Ile Leu Pro Glu Lys Glu Glu 785 790 795 800 Phe Pro Phe Ala Leu Gly Val Gln Thr Leu Pro Gln Thr Cys Asp Glu 805 810 815 Pro Lys Ala His Thr Ser Phe Gln Ile Ser Leu Ser Val Ser Tyr Thr 820 825 830 Gly Ser Arg Ser Ala Ser Asn Met Ala Ile Val Asp Val Lys Met Val 835 840 845 Ser Gly Phe Ile Pro Leu Lys Pro Thr Val Lys Met Leu Glu Arg Ser 850 855 860 Asn His Val Ser Arg Thr Glu Val Ser Ser Asn His Val Leu Ile Tyr 865 870 875 880 Leu Asp Lys Val Ser Asn Gln Thr Leu Ser Leu Phe Phe Thr Val Leu 890

Gln Asp Val Pro Val Arg Asp Leu Lys Pro Ala Ile Val Lys Val Tyr 900

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Tyr Ser Val Ile Arg Gly Glu Ala Phe Thr Leu Lys Ala Thr Val Leu 260 265 270 Asn Tyr Leu Pro Thr Cys Ile Arg Val Ala Val Gln Leu Glu Ala Ser 275 280 285 Pro Asp Phe Leu Ala Ala Pro Glu Glu Lys Glu Gln Arg Ser His Cys 290 295 300 Ile Cys Met Asn Gln Arg His Thr Ala Ser Trp Ala Val Ile Pro Lys 305 310 315 320 Ser Leu Gly Asn Val Asn Phe Thr Val Ser Ala Glu Ala Leu Asn Ser 325 330 335 Lys Glu Leu Cys Gly Asn Glu Val Pro Val Val Pro Glu Gln Gly Lys 340 345 350 Lys Asp Thr Ile Ile Lys Ser Leu Leu Val Glu Pro Glu Gly Leu Glu 355 360 365 Asn Glu Val Thr Phe Asn Ser Leu Leu Cys Pro Met Gly Ala Glu Val 370 375 380 Ser Glu Leu Ile Ala Leu Lys Leu Pro Ser Asp Val Val Glu Glu Ser 385 390 395 400 Ala Arg Ala Ser Val Thr Val Leu Gly Asp Ile Leu Gly Ser Ala Met 405 410 415 Gln Asn Thr Gln Asp Leu Leu Lys Met Pro Tyr Gly Cys Gly Glu Gln 420 425 430 Asn Met Val Leu Phe Ala Pro Asn Ile Tyr Val Leu Asp Tyr Leu Asn 435 440 445 Glu Thr Gln Gln Leu Thr Gln Glu Ile Lys Thr Lys Ala Ile Ala Tyr 450 455 460 Leu Asn Thr Gly Tyr Gln Arg Gln Leu Asn Tyr Lys His Arg Asp Gly 470 475 480 Ser Tyr Ser Ala Phe Gly Asp Lys Pro Gly Arg Asn His Ala Asn Thr 485 490 495 Trp Leu Thr Ala Phe Val Leu Lys Ser Phe Ala Gln Ala Arg Lys Tyr 500 505 510 Ile Phe Ile Asp Glu Val His Ile Thr Gln Ala Leu Leu Trp Leu Ser 515 520 525 Gln Gln Lys Asp Asn Gly Cys Phe Arg Ser Ser Gly Ser Leu Leu 530 540 Asn Asn Ala Met Lys Gly Gly Val Glu Asp Glu Val Thr Leu Ser Ala 545 550 555 560 Tyr Ile Thr Ile Ala Leu Leu Glu Met Ser Leu Pro Val Thr His Pro 565 570 575 Val Val Arg Asn Ala Leu Phe Cys Leu Asp Thr Ala Trp Lys Ser Ala

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Gly Gly Ala Gly Gly Ser His Val Tyr Thr Lys Ala Leu Leu Ala 595 600 605 Ala Phe Ala Leu Ala Gly Pro Val Val Arg Asn Ala Leu Phe Cys 610 620 Leu Asp Thr Ala Trp Lys Ser Ala Arg Gly Gly Ala Gly Gly Ser His 625 630 635 640 Val Tyr Thr Lys Ala Leu Leu Ala Tyr Ala Phe Ala Leu Ala Gly Pro 645 650 655 Gln Ala Thr Ser Ala Glu Val Glu Met Thr Ala Tyr Val Leu Leu Ala 660 665 670 Tyr Leu Thr Thr Glu Pro Ala Pro Thr Gln Glu Asp Leu Thr Ala Ala 675 680 685 Met Leu Ile Val Lys Trp Leu Thr Lys Gln Gln Asn Ser His Gly Gly 690 695 700 Phe Ser Ser Thr Gln Asp Thr Val Val Ala Leu His Ala Leu Ser Lys 715 720 Tyr Gly Ser Ala Thr Phe Thr Arg Ala Lys Lys Ala Ala Gln Val Thr 725 730 735 Ile Arg Ser Ser Gly Thr Phe Ser Thr Lys Phe Gln Val Asn Asn Asn 740 745 750 Asn Gln Leu Leu Gln Arg Val Thr Leu Pro Thr Val Pro Gly Asp 755 760 765 Tyr Thr Val Lys Val Thr Gly Glu Gly Cys Val Tyr Leu Gln Thr Ser 770 775 780 Leu Lys Tyr Ser Val Leu Pro Arg Glu Glu Glu Phe Pro Phe Ala Val 785 790 795 800 Val Val Gln Thr Leu Pro Gly Thr Cys Glu Asp Pro Lys Ala His Thr 805 810 815 Ser Phe Gln Ile Ser Leu Asn Ile Ser Tyr Thr Gly Ser Arg Ser Glu 820 825 830 Ser Asn Met Ala Ile Ala Asp Val Lys Met Val Ser Gly Phe Ile Pro 835 840 845 Leu Lys Pro Thr Val Lys Met Leu Glu Arg Ser Val His Val Ser Arg 850 855 860 Thr Glu Val Ser Asn Asn His Val Leu Ile Tyr Leu Asp Lys Val Ser 865 870 875 880 Asn Gln Thr Val Asn Leu Ser Phe Thr Val Gln Gln Asp Ile Pro Ile 885 890 895 Arg Asp Leu Lys Pro Ala Val Val Lys Val Tyr Asp Tyr Tyr Glu Lys 900 905 910 Asp Glu Phe Ala Val Ala Lys Tyr Ser Ala Pro Cys Ser Thr Asp Tyr

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Gly Asn Ala 930

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<212> PRT

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Ser Phe Ser Glu Gly Gln Ser Leu Pro Ala Ser Lys Thr His Leu Arg 35 40 45

Val Thr Ala Ser Pro Gln Ser Leu Cys Ala Leu Arg Ala Val Asp Gln 50 60

Ser Val Leu Leu Arg Lys Pro Glu Ala Val Leu Ser Ala Ser Ser Val 65 70 75 80

Tyr Ala Leu Leu Pro Val Lys Asp Leu Thr Gly Phe Pro Gly Leu Leu 85 90 95

Gly Gln Glu Glu Asn Asp Gly Glu Cys Val Ser Leu Tyr Asn Thr 100 105 110

Tyr Ile Asp Gly Ile Leu Tyr Ser Pro Glu Pro Asn Ile Asn Glu Lys 115 120 125

Asp Met Tyr Gly Phe Leu Lys Asp Met Gly Leu Lys Val Phe Thr Asn 130 140

Thr Lys Ile Gln Lys Pro Gln Leu Cys Ala His Val Gln Lys Phe Glu 145 150 155 160

Val Pro Thr Met Ala Tyr Ser Tyr Ser Glu Ser Ser Ser Phe Arg Ser 165 170 175

Gly Pro Arg Val Pro Ala Val Gly Ile Ala Ala Thr Tyr Ser Glu 185 190

Pro Pro Lys Glu Thr Val Arg Thr Tyr Ser Pro Glu Thr Trp Ile Trp 195 200 205

Asp Leu Lys Val Thr Asp Ser Ser Gly Val Ala Glu Val Glu Val Thr 210 215 220

Val Pro Asp Thr Ile Thr Glu Trp Lys Ala Gly Ala Phe Cys Leu Ser 225 230 235 240

Asn Asp Thr Gly Leu Gly Leu Ser Pro Thr Ala Ser Leu Arg Ala Phe 245 250 255

Gln Pro Phe Phe Val Glu Leu Thr Met Pro Tyr Ser Val Ile Arg Gly 260 265 270

Cura 468 SEQ list 0705 Glu Ala Phe Thr Leu Lys Ala Thr Val Leu Asn Tyr Leu Pro Asp Cys
275
280
285 Ile Arg Ile Ser Val His Leu Glu Ala Ser Pro Lys Phe Leu Ala Glu 290 295 300 Pro Lys Ala Lys Glu Gln Glu Ser Tyr Cys Val Cys Gly Asn Glu Arg 305 310 315 320 Gln Thr Val Ser Trp Val Val Thr Pro Lys Ser Leu Gly Asn Val Asn 325 330 335 Phe Thr Val Ser Ala Glu Ala Leu Glu Ser Ser Glu Leu Cys Gly Asn 340 345 350 Glu Lys Thr Val Val Pro Thr Tyr Gly Lys Lys Asp Thr Ile Ile Lys 355 360 365 Pro Leu Leu Val Glu Pro Glu Gly Ile Glu Lys Glu Glu Thr Trp Thr 370 380 Ser Leu Ile Arg Val Ser Asp Thr Thr Val Ser Glu Lys Leu His Leu 385 390 395 400 Glu Leu Pro Ser Asn Val Ile Gln Asp Ser Ala Arg Ala Thr Val Ser 405 410 415 Ile Leu Gly Asp Ile Leu Gly Ser Ala Met Gln Asn Ile Gln Asn Leu 420 425 430 Leu Gln Met Pro Tyr Gly Cys Gly Glu Gln Asn Met Val Leu Phe Ala 435 440 445 Pro Asn Ile Tyr Val Leu Asp Tyr Leu Asn Glu Thr Gln Gln Leu Thr 450 455 460 Pro Asp Ile Lys Ser Lys Ala Ile Ser Tyr Leu Ser Thr Gly Tyr Gln 465 470 475 480 Arg Gln Leu Asn Tyr Lys His Arg Asp Gly Ser Tyr Ser Thr Phe Gly 485 490 495 Glu Asn Tyr Arg Gly Gly Gln Gly Asn Thr Trp Leu Thr Ala Phe Val 500 505 510 Leu Lys Thr Phe Ser Gln Ala Arg Lys Tyr Ile Phe Ile Asp Glu Ala 515 520 525 His Ile Thr Gln Ala Leu Ser Trp Leu Ser Gln Lys Gln Lys Asp Asn 530 540 Gly Cys Phe Trp Ser Ser Gly Ser Leu Leu Asn Asn Ala Ile Lys Gly 545 550 560 Gly Val Glu Asp Glu Ile Ser Leu Ser Ala Tyr Ile Thr Ile Ala Leu 565 570 575 Leu Glu Met Ser Leu Pro Asp Thr His Pro Val Val Arg Asn Ala Leu 580 585 590 Phe Cys Leu Glu Ser Ala Trp Lys Ser Ala Lys Glu Gly Thr His Gly 595 600 605

Cura 468 SEQ list 0705
Ser His Val Tyr Thr Lys Ala Leu Leu Ala Tyr Ala Phe Ala Leu Ala
610 615 620 Gly Asn Gln Glu Arg Lys Lys Glu Ile Leu Lys Ser Leu Glu Asp Glu 625 630 635 640 Gly Val Lys Glu Asp Asn Ser Leu His Trp Ala Arg Pro Gln Lys Pro 645 650 655 Lys Val Ser Glu Gly Phe Leu Phe Lys Ser Gln Ala Pro Ser Ala Glu 660 665 670 Val Glu Met Thr Ser Tyr Val Leu Leu Ala Tyr Leu Thr Ala Arg Pro 675 680 685 Ala Pro Thr Pro Glu Asp Leu Thr Ser Ala Thr Asp Ile Val Asn Trp 690 695 700 Val Thr Lys Gln Gln Asn Ser His Gly Gly Tyr Ser Ser Thr Gln Asp 705 710 715 720 Thr Val Val Ala Leu His Ala Leu Ser Lys Tyr Ala Ala Ala Thr Phe 725 730 735 Thr Arg Thr Glu Lys Ala Ala Gln Val Thr Ile Lys Ser Ser Gly Thr 740 745 750 Phe Ser Thr Asn Phe Glu Val Asn His Asn Asn Arg Leu Leu Gln 755 760 765 Gln Val Ser Leu Pro Thr Val Ser Asp Ser Tyr Thr Ile Thr Val Thr 770 775 780 Gly Glu Gly Asn Val Tyr Leu Gln Thr Ser Leu Lys Tyr Asn Val Pro 785 790 795 800 Ser Glu Lys Gly Thr Phe Pro Phe Ala Leu Glu Ala Glu Thr Val Pro 805 810 815 Gln Ala Cys Asp Gly Pro Lys Ala His Thr Ser Phe Gln Ile Ser Leu 820 825 830 Asn Val Ser Tyr Ile Gly Ser Arg Pro Val Ser Asn Met Ala Ile Val 835 840 845 Asp Val Lys Met Val Ser Gly Phe Ile Pro Leu Lys Pro Thr Val Lys 850 860 Asn Leu Glu Lys Ser Glu His Ile Ser Arg Thr Glu Val Ser Asn Asn 865 870 875 880 His Val Leu Ile Tyr Leu Asp Lys Val Ser Asn Gln Thr Leu Ser Leu 885 890 895 Ser Phe Phe Val Val Gln Asp Ile Glu Val Arg Asp Leu Lys Pro Ala $900 \hspace{1.5cm} 905 \hspace{1.5cm} 910$ Ile Ile Lys Val Tyr Asp Tyr Tyr Glu Thr Asn Glu Phe Ala Ile Ala 915 920 925 Glu Tyr His Ala Pro Cys Ser Lys Asp Pro Gly Asn Ala 930 935 940

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Leu Phe Thr Val Leu Ser Ala Val Met Val Gly Leu Val Met Phe Ser 35 40 45

Phe Gly Cys Ser Val Glu Ser Gln Lys Leu Trp Leu His Leu Arg Arg 50 55 60

Pro Trp Gly Ile Ala Val Gly Leu Leu Ser Gln Phe Gly Leu Met Pro 65 70 75 80

Leu Thr Ala Tyr Leu Leu Ala Ile Gly Phe Gly Leu Lys Pro Phe Gln 85 90 95

Ala Ile Ala Val Leu Met Met Gly Ser Cys Pro Gly Gly Thr Ile Ser 100 105 110

Asn Val Leu Thr Phe Trp Val Asp Gly Asp Met Asp Leu Ser Ile Ser 115 120 125

Met Thr Thr Cys Ser Thr Val Ala Ala Leu Gly Met Met Pro Leu Cys 130 135 140

Leu Tyr Ile Tyr Thr Arg Ser Trp Thr Leu Thr Gln Asn Leu Val Ile 145 150 155 160

Pro Tyr Gln Ser Ile Gly Ile Thr Leu Val Ser Leu Val Val Pro Val 165 170 175

Ala Ser Gly Val Tyr Val Asn Tyr Arg Trp Pro Lys Gln Ala Thr Val 180 185 190

Ile Leu Lys Val Gly Ala Ile Leu Gly Gly Met Leu Leu Leu Val Val 195 200 205

Ala Val Thr Gly Met Val Leu Ala Lys Gly Trp Asn Thr Asp Val Thr 210 215 220

Leu Leu Val Ile Ser Cys Ile Phe Pro Leu Val Gly His Val Thr Gly 235 240

Phe Leu Leu Ala Phe Leu Thr His Gln Ser Trp Gln Arg Cys Arg Thr 245 250 255

Ile Ser Ile Glu Thr Gly Ala Gln Asn Ile Gln Leu Cys Ile Ala Met 260 265 270

Leu Gln Leu Ser Phe Ser Ala Glu Tyr Leu Val Gln Leu Leu Asn Phe 275 280 285

Ala Leu Ala Tyr Gly Leu Phe Gln Val Leu His Gly Leu Leu Ile Val 290 295 300

Ala Ala Tyr Gln Ala Tyr Lys Arg Arg Gln Lys Ser Lys Cys Arg Arg 320 Gln His Pro Asp Cys Pro Asp Val Cys Tyr Glu Lys Gln Pro Arg Glu 335 Thr Ser Ala Phe Leu Asp Lys Gly Asp Glu Ala Ala Val Thr Leu Gly 340 Pro Val Gln Pro Glu Gln His His Arg Ala Ala Glu Leu Thr Ser His 355 Tle Pro Ser Cys Glu

Ile Pro Ser Cys Glu 370

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Ser Met Thr Thr Cys Ser Thr Leu Leu Ala Leu Gly Met Met Pro Leu 130 135 140

Cys Leu Tyr Val Tyr Thr Lys Met Trp Val Asp Ser Gly Thr Ile Val 145 150 155 160

Ile Pro Tyr Asp Asn Ile Gly Thr Ser Leu Val Ala Leu Val Val Pro 165 170 175

Val Ser Ile Gly Met Phe Val Asn His Lys Trp Pro Gln Lys Ala Lys 180 185 190

Ile Ile Leu Lys Val Gly Ser Ile Ala Gly Ala Val Leu Ile Val Leu 195 200 205

Ile Ala Val Val Gly Gly Ile Leu Tyr Gln Ser Ala Trp Ile Ile Glu Page 71 Pro Lys Leu Trp Ile Ile Gly Thr Ile Phe Pro Met Ala Gly Tyr Ser 235 230 235 240

215

Leu Gly Phe Phe Leu Ala Arg Ile Ala Gly Gln Pro Trp Tyr Arg Cys 245 250 255

Arg Thr Val Ala Leu Glu Thr Gly Met Gln Asn Thr Gln Leu Cys Ser 260 265 270

Thr Ile Val Gln Leu Ser Phe Ser Pro Glu Asp Leu Thr Tyr Val Phe 275 280 285

Thr Phe Pro Leu Ile Tyr Ser Ile Phe Gln Ile Ala Phe Ala Ala Ile 290 295 300

Phe Leu Gly Ile Tyr Val Ala Tyr Arg Lys Cys His Gly Lys Asn Asp 305 310 315 320

Ala Glu Phe Pro Asp Ile Lys Asp Thr Lys Thr Glu Pro Glu Ser Ser 325 330 335

Phe His Gln Met Asn Gly Gly Phe Gln Pro Glu 340 345

<210> 42 <211> 348

<212> PRT

<213> Rattus norvegicus

Asp Ser Cys Leu Val Thr Glu Ser Asn Phe Asn Ala Ile Leu Ser Thr 20 25 30

Val Met Ser Thr Val Leu Thr Ile Leu Leu Ala Met Val Met Phe Ser 35 40 45

Met Gly Cys Asn Val Glu Ile Asn Lys Phe Leu Gly His Ile Lys Arg 50 60

Pro Trp Gly Ile Phe Val Gly Phe Leu Cys Gln Phe Gly Ile Met Pro 65 70 75 80

Leu Thr Gly Phe Ile Leu Ser Val Ala Ser Gly Ile Leu Pro Val Gln $85 \hspace{1cm} 90 \hspace{1cm} 95$

Ala Val Val Leu Ile Met Gly Cys Cys Pro Gly Gly Thr Gly Ser 100 105 110

Asn Ile Leu Ala Tyr Trp Ile Asp Gly Asp Met Asp Leu Ser Val Ser 115 120 125

Met Thr Thr Cys Ser Thr Leu Leu Ala Leu Gly Met Met Pro Leu Cys 130 135 140

Leu Phe Ile Tyr Thr Lys Met Trp Val Asp Ser Gly Thr Ile Val Ile 145 150 155 160
 Pro
 Tyr
 Asp
 Ser
 Ile 165
 Gly
 Ile ser
 Cura 170 Cura 170
 Ala Leu Val 110
 Pro 175
 Val 185
 Trp Pro Gln Lys Ala Leu 196
 Lys Ala Lys Ile 196
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<210> 43 <211> 348

<212> PRT

<213> Mus musculus

<400> 43

Met Asp Asn Ser Ser Val Cys Pro Pro Asn Ala Thr Val Cys Glu Gly 1 5 15

Asp Ser Cys Val Val Pro Glu Ser Asn Phe Asn Ala Ile Leu Asn Thr 20 25 30

Val Met Ser Thr Val Leu Thr Ile Leu Leu Ala Met Val Met Phe Ser 35 40 45

Met Gly Cys Asn Val Glu Val His Lys Phe Leu Gly His Ile Lys Arg 50 55 60

Pro Trp Gly Ile Phe Val Gly Phe Leu Cys Gln Phe Gly Ile Met Pro 65 70 75 80

Leu Thr Gly Phe Ile Leu Ser Val Ala Ser Gly Ile Leu Pro Val Gln 85 90 95

Ala Val Val Leu Ile Met Gly Cys Cys Pro Gly Gly Thr Gly Ser 100 105 110

Asn Ile Leu Ala Tyr Trp Ile Asp Gly Asp Met Asp Leu Ser Val Ser 115 120 125 Met Thr Thr Cys Ser Thr Leu Leu Ala Leu Gly Met Met Pro Leu Cys 130 135 140 Leu Phe Val Tyr Thr Lys Met Trp Val Asp Ser Gly Thr Ile Val Ile 145 150 155 160 Pro Tyr Asp Ser Ile Gly Ile Ser Leu Val Ala Leu Val Ile Pro Val 165 170 175 Ser Phe Gly Met Phe Val Asn His Lys Trp Pro Gln Lys Ala Lys Ile 180 185 190 Ile Leu Lys Ile Gly Ser Ile Thr Gly Val Ile Leu Ile Val Leu Ile 195 200 205 Ala Val Ile Gly Gly Ile Leu Tyr Gln Ser Ala Trp Ile Ile Glu Pro 210 215 220 Lys Leu Trp Ile Ile Gly Thr Ile Phe Pro Ile Ala Gly Tyr Ser Leu 225 230 235 240 Gly Phe Phe Leu Ala Arg Leu Ala Gly Gln Pro Trp Tyr Arg Cys Arg 245 250 255 Thr Val Ala Leu Glu Thr Gly Met Gln Asn Thr Gln Leu Cys Ser Thr 260 265 270 Ile Val Gln Leu Ser Phe Ser Pro Glu Asp Leu Asn Leu Val Phe Thr 275 280 285 Phe Pro Leu Ile Tyr Thr Val Phe Gln Leu Val Phe Ala Ala Val Ile 290 295 300 Leu Gly Ile Tyr Val Thr Tyr Arg Lys Cys Tyr Gly Lys Asn Asp Ala 305 310 315 320 Glu Phe Leu Glu Lys Thr Asp Asn Glu Met Asp Ser Arg Pro Ser Phe 325 330 335 Asp Glu Thr Asn Lys Gly Phe Gln Pro Asp Glu Lys 340

<210> 44 <211> 348 <212> PRT

<213> Mus musculus

<400> 44

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Val Met Ser Thr Val Leu Thr Ile Leu Leu Ala Met Val Met Phe Ser 35 40 45

Met Gly Cys Asn Val Glu Val His Lys Phe Leu Gly His Ile Lys Arg Page 74

Pro Trp Gly Ile Phe Val Gly Phe Leu Cys Gln Phe Gly Ile Met Pro 65 70 75 80 Leu Thr Gly Phe Ile Leu Ser Val Ala Ser Gly Ile Leu Pro Val Gln
85 90 95 Ala Val Val Leu Ile Met Gly Cys Cys Pro Gly Gly Thr Gly Ser 100 105 110 Asn Ile Leu Ala Tyr Trp Ile Asp Gly Asp Met Asp Leu Ser Val Ser 115 120 125 Met Thr Thr Cys Ser Thr Leu Leu Ala Leu Gly Met Met Pro Leu Cys 130 135 140 Phe Val Tyr Thr Lys Met Trp Val Asp Ser Gly Thr Ile Val Ile 150 155 160 Pro Tyr Asp Ser Ile Gly Ile Ser Leu Val Ala Leu Val Ile Pro Val 165 170 175 Ser Phe Gly Met Phe Val Asn His Lys Trp Pro Gln Lys Ala Lys Ile 180 185 190 Ile Leu Lys Ile Gly Ser Ile Thr Gly Val Ile Leu Ile Val Leu Ile 195 200 205 Ala Val Ile Gly Gly Ile Leu Tyr Gln Ser Ala Trp Ile Ile Glu Pro 210 215 220 Lys Leu Trp Ile Ile Gly Thr Ile Phe Pro Ile Ala Gly Tyr Ser Leu 225 230 235 240 Gly Phe Phe Leu Ala Arg Leu Ala Gly Gln Pro Trp Tyr Arg Cys Arg 245 250 255 Thr Val Ala Leu Glu Thr Gly Met Gln Asn Thr Gln Leu Cys Ser Thr 260 265 270 Ile Val Gln Leu Ser Phe Ser Pro Glu Asp Leu Asn Leu Val Phe Thr 275 280 285 Phe Pro Leu Ile Tyr Thr Val Phe Gln Leu Val Phe Ala Ala Val Ile 290 295 300 Leu Gly Ile Tyr Val Thr Tyr Arg Lys Cys Tyr Gly Lys Asn Asp Ala 305 310 315 320 Glu Phe Leu Glu Lys Thr Asp Asn Glu Met Asp Ser Arg Pro Ser Phe 325 330 335 Asp Glu Thr Asn Lys Gly Phe Gln Pro Asp Glu Lys 340

<210> 45 <211> 348

<212> PRT

<213> Homo sapiens

<400> 45

Cura 468 SEQ list 0705
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Cura 468 SEQ list 0705 Gln Glu Thr Asn Lys Gly Phe Gln Pro Asp Glu Lys 340 345

<210> 46

<211> 272 <212> PRT <213> Homo sapiens <400> 46 Met Ala Ala Lys Val Phe Glu Ser Ile Gly Lys Phe Gly Leu Ala Leu 1 5 10 15 Ala Val Ala Gly Gly Val Val Asn Ser Ala Leu Tyr Asn Val Asp Ala 20 25 30 Gly His Arg Ala Val Ile Phe Asp Arg Phe Arg Gly Val Gln Asp Ile 35 40 45Val Val Gly Glu Gly Thr His Phe Leu Ile Pro Trp Val Gln Lys Pro 50 55 60 Ile Ile Phe Asp Cys Arg Ser Arg Pro Arg Asn Val Pro Val Ile Thr 65 70 75 80 Gly Ser Lys Asp Leu Gln Asn Val Asn Ile Thr Leu Arg Ile Leu Phe 85 90 95 Arg Pro Val Ala Ser Gln Leu Pro Arg Ile Phe Thr Ser Ile Gly Glu
100 105 110 Asp Tyr Asp Glu Arg Val Leu Pro Ser Ile Thr Thr Glu Ile Leu Lys 115 120 125 Ser Val Val Ala Arg Phe Asp Ala Gly Glu Leu Ile Thr Gln Arg Glu 130 135 140 Leu Val Ser Arg Gln Val Ser Asp Asp Leu Thr Glu Arg Ala Ala Thr 145 150 155 160 Phe Gly Leu Ile Leu Asp Asp Val Ser Leu Thr His Leu Thr Phe Gly 175 Lys Glu Phe Thr Glu Ala Val Glu Ala Lys Gln Val Ala Gln Glu 180 185 190 Ala Glu Arg Ala Arg Phe Val Val Glu Lys Ala Glu Gln Gln Lys Lys 195 200 205 Ala Ala Ile Ile Ser Ala Glu Gly Asp Ser Lys Ala Ala Glu Leu Ile 210 225 220 Ala Asn Ser Leu Ala Thr Ala Gly Asp Gly Leu Ile Glu Leu Arg Lys 225 230 235 240 Leu Glu Ala Ala Glu Asp Ile Ala Tyr Gln Leu Ser Arg Ser Arg Asn 245 250 255 Ile Thr Tyr Leu Pro Ala Gly Gln Ser Val Leu Leu Gln Leu Pro Gln 260 265 270

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<210> 47
<211> 272
<212> PRT
<213> Rattus norvegicus
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20 25 30
Gly His Arg Ala Val Ile Phe Asp Arg Phe Arg Gly Val Gln Asp Ile 40 45
Val Val Gly Glu Gly Thr His Phe Leu Ile Pro Trp Val Gln Lys Pro 50 55 60
Ile Ile Phe Asp Cys Arg Ser Arg Pro Arg Asn Val Pro Val Ile Thr 65 70 75 80
Gly Ser Lys Asp Leu Gln Asn Val Asn Ile Thr Leu Arg Ile Leu Phe 85 90 95
Arg Pro Val Ala Ser Gln Leu Pro Arg Ile Tyr Thr Ser Ile Gly Glu 100 105 110
Asp Tyr Asp Glu Arg Val Leu Pro Ser Ile Thr Thr Glu Ile Leu Lys
115 120 125
Ser Val Val Ala Arg Phe Asp Ala Gly Glu Leu Ile Thr Gln Arg Glu
130 135 140
Leu Val Ser Arg Gln Val Ser Asp Asp Leu Thr Glu Arg Ala Ala Thr
145 150 155 160
Phe Gly Leu Ile Leu Asp Asp Val Ser Leu Thr His Leu Thr Phe Gly 165 170 175
Lys Glu Phe Thr Glu Ala Val Glu Ala Lys Gln Val Ala Gln Glu
180 185 190
Ala Glu Arg Ala Arg Phe Val Val Glu Lys Ala Glu Gln Gln Lys Lys
195 200 205
Ala Ala Ile Ile Ser Ala Glu Gly Asp Ser Lys Ala Ala Glu Leu Ile
210 215 220
Ala Asn Ser Leu Ala Thr Ala Gly Asp Gly Leu Ile Glu Leu Arg Lys
225 230 235 240
Leu Glu Ala Ala Glu Asp Ile Ala Tyr Gln Leu Ser Arg Ser Arg Asn
245 250 255
Ile Thr Tyr Leu Pro Ala Gly Gln Ser Val Leu Leu Gln Leu Pro Gln 260 265 270
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<210> 48 <211> 1798

<212> PRT

<213> Drosophila melanogaster

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Leu Leu Val Tyr Gln Phe Cys Asp Glu Thr Thr Ser Ser Gly Ala Thr $20 \hspace{1cm} 25 \hspace{1cm} 30$

Ser Gly Phe Gly Ser Thr Gly Gly Asp Val Gly Gly Gly Ser Gly Gly 35 40 45

Asp Gly Pro Ala Val Gly Ser Gly Gly Val Leu Leu Asn Gly Asp Cys 50 60

Tyr Arg Lys Pro Pro Met Val Pro Pro Lys Ser Pro Asn Gly Thr Pro 65 70 75 80

Lys Asn Cys Gln Ser Pro Thr Ser Pro Arg Leu Lys Ser Ser Ala Ser 85 90 95

Val Gly Cys Gly Gly Gly Ser Ser Gly Gly Pro Arg Val Arg Ser Ala 100 105 110

Ser Thr Gly Arg Asp Lys Lys Ser Glu Leu Gln Ala Arg Tyr Trp Ala 115 120 125

Leu Leu Phe Gly Asn Leu Gln Arg Ala Ile Asn Glu Ile Tyr Gln Thr 130 135 140

Val Glu Cys Tyr Glu Asn Ile Ser Ser Cys Gln Glu Thr Ile Leu Val 145 150 155 160

Leu Glu Asn Tyr Val Arg Asp Phe Lys Ala Leu Cys Glu Trp Phe Lys 165 170 175

Val Ser Trp Asp Tyr Glu Ser Arg Pro Leu Gln Gln Arg Pro Gln Ser 180 185 190

Leu Ala Trp Glu Val Arg Lys Ser Asn Pro Thr Pro Arg Val Arg Thr 195 200 205

Arg Ser Leu Cys Ser Pro Asn Asn Ser Gly Lys Ser Ser Pro Ala Leu 210 215 220

Phe Pro Gly Thr Gln Ser Gly Glu Thr Ser Pro Phe Cys Asp Asn Gly 235 230 235

Gln Ile Ser Pro Arg Lys Leu Leu Arg Ala Tyr Asp Gln Val Pro Lys 245 250 255

Gly Ala Met Arg Leu Asn Val Arg Glu Leu Phe Ala Ala Ser Lys Arg 260 265 270

Ala Thr Gln Gly Ser Ser Gln Ser Asp Asn Met Glu Gly Pro Leu Asp 275 280 285

Leu Ser Gly Asp Lys Ser Asn Phe Val Leu Arg Ser Thr Gln Tyr Ala 290 295 300

Cura 468 SEQ list 0705 Gln Thr Asp Leu Glu Asp Pro His Leu Thr Leu Ala Asp Val Arg Glu 305 310 315 320 Lys Met Arg Met Glu Ala Glu Glu Arg Glu Ala Gln Asn Arg Ile Glu 325 330 335 Asn Glu Ala Leu Glu Glu Val Thr Ile Pro Ile Asp Asn Glu Asp Ala 340 345 350 Thr Glu Ser Leu Asn Lys Gln Glu Pro Ser Ser Leu Glu Leu Pro Ile 355 360 365 His Asn Val Ala Asp Leu Ser Lys Glu Pro Glu Leu Met Glu Ala Ala 370 375 380 Ser Glu Ala Thr Ala Leu Glu Met Thr Val Ala Ser Leu Glu Ser Met 385 390 395 400 Glu Asn Ala Leu Leu Asn Gln Gln Ala Asn Lys Glu Pro Thr Pro Pro 405 410 415 Ser Thr Val Ile Lys Pro Leu Ala Glu Ile Leu Lys Lys Pro Gln Pro 420 425 430 Leu Asn Pro Leu Ser Gly Asn Asn Val Gln Asn Ser Pro Leu Lys Tyr 435 440 445 Ser Ser Val Leu Asn Arg Pro Ser Lys Lys Met Ile Pro Pro Pro Gly 450 455 460 Gly Val Ala Ala Gln Lys Thr Ile Ser Thr Lys Pro Gly Leu Val Lys 465 470 475 480 Pro Asn Leu Thr Thr Thr Val Asn Gly Leu Arg Ser Thr Lys Thr Ala 485 490 495 Thr Ala Pro Pro Ala Ile Lys Thr Thr Gly Arg Ser Gly Leu Gln Arg 500 505 510 His Pro Arg Pro Ser Ser Lys Thr Glu Cys Tyr Gly Pro Pro Asn Asn 515 520 525 Val Ala Ser Arg Leu Ser Ala Arg Ser Arg Thr Ile Asn Thr Leu Lys 530 540 Ala Glu Asn Gln His Ser Glu Pro Lys Gln Ile Gln Pro Pro Thr Asp 545 550 555 560 Ala Asp Asp Gly Trp Leu Thr Val Lys Asn Arg Arg Arg Thr Ser Met 565 570 575 His Trp Ala Asn Arg Phe Asn Gln Pro Thr Gly Tyr Ala Ser Leu Pro 580 585 590 Thr Leu Ala Leu Leu Asn Glu Gln Gln Lys Glu Gln Glu His Lys Glu 595 600 605 Lys Gln Lys Gly Glu Asp Asp Gly Lys Val Ile Val Lys Thr Ile Ser 610 615 620 Ala Lys Thr Lys Ala Pro Ile Glu Val Ala Lys Ala Lys Ala Lys Thr 625 630 635 640

Cura 468 SEQ list 0705
Ser Ile Val Ile Thr Arg Pro Glu Ile Lys Asn Ala Lys Ala Lys Val
645 650 655 Asn Ser Phe Pro Val Gln Lys Ser Asn Thr Asn Gln Val Lys Lys Pro 660 665 670 Glu Lys Gln Glu Lys Ser Asp Thr Thr Ala Pro Ala Ala Ile Ala Ser 675 680 685 Ser Arg Leu Lys Met Thr Ser Leu His Lys Glu Tyr Met Arg Ser Glu 690 695 700 Lys Asn Ala Leu Arg Lys Leu Gln Gln Lys Glu Gln Gly Asn Gln Gln 705 710 715 720 His Asn Ser Ser Ser Ser Ser Ala Glu Thr Val Val Glu Ser Cys Asn 725 730 735 Glu Asp His Ser Lys Ile Asp Ile Lys Ile Gln Thr Asn Cys Glu Phe 740 745 750 Ser Lys Thr Ile Gly Glu Leu Tyr Glu Ser Ile Ala His Cys Lys Leu 755 760 765 Pro Ser Gly Ser Leu Lys Thr Asn Ala Ser Thr Leu Ser Ala Cys Asp 770 780 Glu Asn Glu Glu Gln Asn Thr Asp Asp Asn Glu Glu Glu Arg Asn Glu 785 790 795 800 Arg Ile Leu Gly Glu Val Gln Glu Ser Leu Glu Arg Gln Ile Arg Glu 805 810 815 Leu Glu Gln Thr Glu Ile Asp Val Asp Thr Glu Thr Asp Glu Thr Asp 820 825 830 Cys Glu Val Gln Leu Glu Gln Asp Asp Gly Val Asp Gly Leu Glu 835 840 845 Met Gly Ser Gly Asp Asp Ser Ala Val Phe Val Thr Met Ser Asp Asp 850 855 860 Glu Asn Ala Ser Leu Glu Leu Arg Tyr Gln Ala Leu Leu Ser Asp Met 865 870 875 880 Ser Trp Asn Glu Arg Ala Glu Ala Leu Ala Thr Leu Gln Ala Tyr Val 885 890 895 Ala Arg His Pro Gly Arg Ala Gln Glu Leu His Gln Lys Leu Ser Ser 900 905 910 Pro Ser Arg Arg Ser Leu Gln Glu Thr Leu Lys Lys Tyr Gln Ala 915 920 925 Lys Gln Ala Arg Ala Gln Gln Lys Arg Asn Leu Leu Gln Gln Glu Lys 930 935 940 Ala Ala Lys Leu Gln Gln Leu Phe Ser Arg Val Glu Asp Val Lys Ala 945 950 955 960 Ala Lys Asn Gln Ile Ile Glu Asp Lys Arg Gln Lys Met Gln Gly Arg 965 970 975

													•		
Leu	Gln	Arg	Ala 980	Ala	Glu	Asn	Arg	Cura Glu 985	468 Gln	SEQ Tyr	lis Leu	t 07 Lys	05 Gln 990	Ile	Ile
Glu	Lys	Ala 995	His	Asp	Glu		Lys 1000	Lys	Leu	Lys		Ile 1005	Asn	Phe	Ile
Lys 1	Asn .010	Ile	Glu	Ala	Gln :	Asn 1015	Lys	Arg	Leu		Leu L020	Leu	Glu	Ser	Ser
Lys 1025	Glu	Thr	Glu		Arg LO30	Leu	G∏n	Asp		Glu LO35	Gln	Glu	Arg		Lys L040
Arg	٧a٦	Glu	Glu 1	Lys L045	Leu	Ala	Lys		Ala L050	Ala	Val	Glu		Arg LO55	Arg
Gln	Ala	Leu	G]u L060	Lys	Glu	Arg	Leu 1	Leu L065	Lys	Leu	Glu		Met L070	Asn	Glu
Thr	Arg 1	Leu L075	Glu	Lys	Glu	G]n	Arg L080	Ile	Gly	Lys		G]n 1085	Glu	Gln	Lys
Glu 1	Lys .090	Gln	Arg	Gln		Leu L095	Ala	Arg	Glu		Ala 100	Arg	Asp	Arg	Glu
Glu 1105	Arg	Leu	Leu	Ala 1	Leu 110	Gln	val	Gln		G]n L115	Gln	Thr	Thr	Glu 1	G]u 120
Leu	Gln	Arg	Lys	Ile	Leu	Gln	Lys	Gln	Met	Glu	Ser	Ala	Arg	Arg	His

Glu Glu Asn Ile Glu His Ile Arg Gln Arg Ala Leu Glu Leu Thr Ile
1140
1145
1150
1170
1180
1180
1180

Pro Thr Arg Gln Ala Asp Glu Gly Arg Gly Asp Gln Asp Val Ser Glu 1155 1160 1165

Asp Ile Leu Asn Gly Asn Ala Thr Ser Thr Thr Asn Glu Asp Cys Asp 1170 1180

Leu Ser Ser Ser Leu Ser Glu Val Gly Gly Asn Asn Ala His Thr Arg 1185 1190 1195 1200

Ser Tyr Lys Lys Lys Met Lys Lys Leu Lys Gln Arg Met Asn Gln Cys $1205 \hspace{1cm} 1210 \hspace{1cm} 1215$

Ala Ala Glu Tyr Leu Glu Ser Leu Glu Ala Leu Pro Ala His Ala Arg 1220 1225 1230

Arg Asp Ser Thr Val Pro Lys Leu Leu Asn Leu Val Val Lys Gly Gly 1235 1240 1245

Gly Ala Gln Gly Leu Asp Arg Asn Leu Gly Asn Leu Leu Arg Val Ile 1250 1260

Pro Lys Ala Gln Thr Leu Asp Phe Leu Ala Phe Leu Cys Met Asp Gly 1265 1270 1275 1280

Leu Gly Ile Leu Ala Asn His Val Ile Ser Lys Gly Met Asp Glu Asn 1285 1290 1295

Ser Glu Ile Ser Arg Lys Ser Val Tyr Leu Ala Ala Gln Leu Tyr Arg 1300 1305 1310

					Cura	468	SEQ	list	0705
 . 7	_	_	 _	_	 				. ~

- Asn Ala Cys Ser Val Cys Pro Gln Ile Ala Arg His Ala Leu Leu Gly 1315 1320 1325
- Asn Ser Ile Thr Val Leu Phe Asp Ala Ile Asn Lys Ser Phe Gln Val 1330 1335 1340
- Ile Leu Lys Ser Asn Arg Cys Thr Lys Glu Thr Phe Ser Asn Phe Trp 1345 1350 1355 1360
- Pro Pro Lys Met Leu His Asn Lys Ser Val Ala Arg Gln Ser Ser Arg 1365 1370 1375
- Leu Glu Ala Leu Ser Leu Pro Glu Glu Lys Ser Pro Gln His Pro Val 1380 1385 1390
- Glu Leu Ser Thr Glu Leu Met Leu Ala Cys Thr Glu Ala Leu Ser Ser 1395 1400 1405
- Ser Tyr Val Lys Lys Asn Thr His Pro Lys Val Pro Glu Arg Leu Pro 1410 1415 1420
- Asp Met Ile Asn Asp Cys Arg Phe His Trp Gln Asp Val Asn Lys Glu 1425 1430 1435 1440
- Asp Met Leu Ala Asp Glu Phe Arg Lys Tyr Lys Cys Tyr Glu Lys Asn 1445 1450 1455
- Pro Val Ile Ala Leu Pro His Pro Ser Leu Ser Ala Ser Leu Cys Arg 1460 1465 1470
- Ser Leu Ser Ala Thr Pro Leu Lys Ile Asn Leu His Gln Phe Leu Gly 1475 1480 1485
- Ser Gly Ile Leu Ile Leu Arg Leu Asn His His Arg His Pro Ala Thr 1490 1495 1500
- Gly Ala Ser Phe Ser Asp Ser Cys Cys Thr Cys Cys Pro Lys Leu Thr 1505 1510 1515 1520
- Thr Glu Ala Ala Val Ala Val Ala Ala His Gln His Gln 1525 1530 1535
- Asn Gln Gln Gln Pro Asp Tyr Ala Val Ile Thr Gly Leu Ile Glu 1540 1545 1550
- Ile Leu Ser Arg Arg Ile Gln Lys Val Arg Glu Ser Ile Glu Ser Asn 1555 1560 1565
- Lys Ser Val Met Leu Ser Leu Leu Thr Thr Leu Gly Phe Leu Ser Arg 1570 1580
- Phe Ile Asp Val Cys Gln Pro Gly Pro Ala Asp Pro Thr Arg Leu Leu 1585 1590 1595 1600
- Ser Ala Ala Lys Ser Thr Glu Leu Phe Gly Thr Val Ser Met Leu Tyr 1605 1610 1615
- Gly Cys Val Met Pro Met Gly Glu Cys Ile Pro Pro Arg Thr Thr Ala 1620 1625 1630
- Leu Ala Ala Ser Thr Phe His Leu Tyr Val Ser Leu Ala Ser Leu Asp 1645 1640 1645

Cura 468 SEQ list 0705 Val Asn Thr Phe Gln Glu Thr Leu Thr Val Glu Gly Pro Leu Ser Leu 1650 1655 1660

Lys Leu Leu Asp Val Met Thr Val Ile Leu Asn Cys Ser Leu Val Asn 1665 1670 1680

Asp Gln Trp Thr Thr Asn Ser Glu Ser Cys Pro Met Leu Ile Asp Leu 1685 1690 1695

Val Ala Ser Met Ala Phe Phe Cys Val Asn Asn Arg Arg His Gln Asp 1700 1705 1710

Leu Leu Ile Ser Glu Gln Tyr Ala Val Ile Phe Lys Arg Met Ala Lys 1715 1720 1725

Leu Pro Thr Gln Phe Asn Pro Val Ile Tyr Pro Phe Leu Val Thr Val 1730 1735 1740

Ser Phe Asn Asn Pro Pro Ala Arg Glu Phe Leu Ser Lys Asp Phe Asp 1745 1750 1760

Leu Thr Phe Leu Asp Glu Tyr Ser Lys Ser Glu Met Ala Gln Arg Asn 1765 1770 1775

Val Val Ile Lys Leu Ile Asn Ser Arg Thr Lys Asp Lys Ile Ser Ala 1780 1785 1790

Gly Asn Lys Lys Asn Ala 1795

<210> 49

<211> 274

<212> PRT

<213> Toxocara canis

<400> 49

Met Ala Gly Ala Gln Lys Leu Leu Gly Arg Leu Gly Gln Ile Gly Val 1 5 10 15

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Asp Gly Gly Gln Arg Ala Val Ile Phe Asp Arg Phe Thr Gly Val Lys
35 40 45

Pro Asp Val Val Gly Glu Gly Thr His Phe Leu Ile Pro Trp Val Gln 50 60

Arg Pro Ile Ile Phe Asp Ile Arg Ser Thr Pro Arg Ala Ile Ser Thr 65 70 75 80

Ile Thr Gly Ser Lys Asp Leu Gln Asn Val Ser Ile Thr Leu Arg Ile 90 95

Leu His Arg Pro Glu Pro Ser Lys Leu Pro Asn Ile Tyr Leu Asn Ile 100 105 110

Gly Gln Asp Tyr Ala Glu Arg Val Leu Pro Ser Ile Thr Asn Glu Val 115 120 125

Leu Lys Ala Val Val Ala Gln Phe Asp Ala His Glu Met Ile Thr Gln 130 135 140

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Arg Glu Ser Val Ser His Arg Val Ser Val Glu Leu Ser Glu Arg Ala Gln Phe Gly Ile Leu Leu Asp Asp Ile Ala Ile Thr His Leu Ser Ilfo Ser Glu Arg Gln Phe Gly Arg Glu Phe Thr Glu Ala Val Glu Met Lys Gln Val Ala Gln Ile Thr Ileu Pro Gly Ileu Val Glu Asp Asp Ala Glu Thr Ala Glu Gln Met Lys Ileu Ala Ala Ile Thr Thr Ala Glu Gly Asp Ala Gln Ala Ala Lys Leu Leu Ala Gln Ala Gln Ala Gln Glu Ala Gln Ala Gln Ileu Thr Ileu Pro Gly Asp Asp Ala Glu Arg Met Ser Lys Thr Arg Asn Val Ileu Tyr Leu Pro Gly Asp Gln Asn Thr Leu Phe Asn Leu Pro Ala

<400> 50

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Gln Lys Gly Glu Phe Ile Gln Glu Ile Leu Pro Thr Ile Ile Ser

Thr Ser Arg Ala Tyr Asp Thr Asn Gln Lys Ala Leu Leu Leu Ala Glu 50 60

Gly Gly Lys Met Tyr Asn Val Leu Glu Asp Tyr Asn Glu Thr Ala Glu 65 70 75 80

Lys Met Leu Ser Lys Ser Val Arg Met Asn Pro Lys Asn Ala Asp Ala 85 90 95

Trp His Glu Leu Gly Leu Cys Val Met Lys Arg Arg Asp Leu Glu Phe 100 105 110

Ala Gln Ser Cys Phe Lys Ile Ala Leu Gly Ile Ser Lys Thr Ala Pro 115 120 125

Ile Leu Thr Ser Leu Ala Val Ala Met Arg Leu Val Ala Leu Glu His 130 135 140

Pro Glu Pro Ala Gln Ala Glu Ile Arg Thr Lys Ala Met Glu Leu Ile Page 85

<210> 50

<211> 402

<212> PRT

<213> Caenorhabditis elegans

160

145 150 Ile Glu Ala Arg Arg Leu Asp Ser Ala Tyr Gly Pro Ala Asn Ile Ala 165 170 175 Phe Ala Thr Gly Leu Phe Tyr Cys Phe Phe Ser Thr Ala Lys Val Glu 180 185 190 Leu Lys Phe Leu Asp Lys Val Ile Glu Asn Tyr Lys Lys Ala Leu Glu 195 200 205 Cys Glu Leu Ser Arg Thr Asp Pro Gln Val Tyr Ile Asn Met Ala Thr 210 215 220 Cys Leu Lys Phe Met Glu Lys Tyr Asp Glu Ala Leu Ala Val Leu Gln 225 230 235 240 Lys Ala Val Glu Tyr Asp Pro Arg Asn Glu Leu Glu Thr Arg Glu Lys 245 250 255 Leu Ala Ser Phe Val Ser Tyr Leu Ser Lys Phe Thr Asp Ala Ile Gln 260 265 270 Lys Lys Gly Lys Met Lys Ala Lys Arg Met Gln Glu Met Ile Asn Glu 275 280 285 Leu Lys Lys Ser Ser Asp Gly Phe Arg Ala Lys Ile Ile Gly Asn Ile 290 295 300 Gly His Asp Glu Thr Ile Pro Val Ala Leu Val Gly Val Asp Ala Ala 305 310 315 320 Gly Glu Val Tyr Gly Ile Thr Ile Tyr Asn Cys Leu Ser Asn Phe Gly 325 330 335 Phe Val Ile Gly Asp Thr Val Thr Ile Ala Lys Pro Asp Phe Arg Glu 340 345 350Ile Lys Asn Leu Thr Ile Pro Ser Asp Pro Glu Ile His Val Asp Ser 355 360 365 Val Lys Trp Ile Arg Val Ala Thr Pro Thr Gln Met Lys Lys Asn Gly 370 380

<210> 51 <211> 711 <212> PRT

Thr Lys

<213> Homo sapiens

<400> 51 Met Gly Trp Leu Pro Leu Leu Leu Leu Leu Thr Gln Cys Leu Gly Val 1 5 15 Pro Gly Gln Arg Ser Pro Leu Asn Asp Phe Gln Val Leu Arg Gly Thr

Val Pro Leu Pro Glu Ser Val Leu Ala Arg Ala Val Ala Ser Thr Gln 385 390 395 400

Cura 468 SEQ list 0705
Glu Leu Gln His Leu Leu His Ala Val Val Pro Gly Pro Trp Gln Glu
35 40 45 Asp Val Ala Asp Ala Glu Glu Cys Ala Gly Arg Cys Gly Pro Leu Met 50 55 Asp Cys Arg Ala Phe His Tyr Asn Val Ser Ser His Gly Cys Gln Leu 65 70 75 80 Leu Pro Trp Thr Gln His Ser Pro His Thr Arg Leu Arg Arg Ser Gly 85 90 95 Arg Cys Asp Leu Phe Gln Lys Lys Asp Tyr Val Arg Thr Cys Ile Met $100 \hspace{1.5cm} 105 \hspace{1.5cm} 110$ Asn Asn Gly Val Gly Tyr Arg Gly Thr Met Ala Thr Thr Val Gly Gly 115 120 125 Leu Pro Cys Gln Ala Trp Ser His Lys Phe Pro Asn Asp His Lys Tyr 130 135 140 Thr Pro Thr Leu Arg Asn Gly Leu Glu Glu Asn Phe Cys Arg Asn Pro 145 150 155 160 Asp Gly Asp Pro Gly Gly Pro Trp Cys Tyr Thr Thr Asp Pro Ala Val 165 170 175 Arg Phe Gln Ser Cys Gly Ile Lys Ser Cys Arg Glu Ala Ala Cys Val 180 185 190 Trp Cys Asn Gly Glu Glu Tyr Arg Gly Ala Val Asp Arg Thr Glu Ser 195 200 205 Gly Arg Glu Cys Gln Arg Trp Asp Leu Gln His Pro His Gln His Pro 210 215 220 Phe Glu Pro Gly Lys Phe Leu Asp Gln Gly Leu Asp Asp Asn Tyr Cys 235 230 235 Arg Asn Pro Asp Gly Ser Glu Arg Pro Trp Cys Tyr Thr Thr Asp Pro 245 250 255 Gln Ile Glu Arg Glu Phe Cys Asp Leu Pro Arg Cys Gly Ser Glu Ala 260 265 270 Gln Pro Arg Gln Glu Ala Thr Thr Val Ser Cys Phe Arg Gly Lys Gly 275 280 285 Glu Gly Tyr Arg Gly Thr Ala Asn Thr Thr Thr Ala Gly Val Pro Cys 290 295 300 Gln Arg Trp Asp Ala Gln Ile Pro His Gln His Arg Phe Thr Pro Glu 305 310 315 320 Lys Tyr Ala Cys Lys Asp Leu Arg Glu Asn Phe Cys Arg Asn Pro Asp 325 330 335 Gly Ser Glu Ala Pro Trp Cys Phe Thr Leu Arg Pro Gly Met Arg Ala 340 345 350 Ala Phe Cys Tyr Gln Ile Arg Arg Cys Thr Asp Asp Val Arg Pro Gln 355 360 365

Cura 468 SEQ list 0705
Asp Cys Tyr His Gly Ala Gly Glu Gln Tyr Arg Gly Thr Val Ser Lys
370 375 380 Thr Arg Lys Gly Val Gln Cys Gln Arg Trp Ser Ala Glu Thr Pro His 385 390 395 400 Lys Pro Gln Phe Thr Phe Thr Ser Glu Pro His Ala Gln Leu Glu Glu 415 Asn Phe Cys Arg Asn Pro Asp Gly Asp Ser His Gly Pro Trp Cys Tyr 420 425 430 Thr Met Asp Pro Arg Thr Pro Phe Asp Tyr Cys Ala Leu Arg Arg Cys 435 440 445 Ala Asp Asp Gln Pro Pro Ser Ile Leu Asp Pro Pro Asp Gln Val Gln 450 460 Phe Glu Lys Cys Gly Lys Arg Val Asp Arg Leu Asp Gln Arg Arg Ser 465 470 475 480 Lys Leu Arg Val Val Gly Gly His Pro Gly Asn Ser Pro Trp Thr Val 485 490 495 Ser Leu Arg Asn Arg Gln Gly Gln His Phe Cys Gly Gly Ser Leu Val 500 505 510 Lys Glu Gln Trp Ile Leu Thr Ala Arg Gln Cys Phe Ser Ser Cys His 515 520 525 Met Pro Leu Thr Gly Tyr Glu Val Trp Leu Gly Thr Leu Phe Gln Asn 530 540 Pro Gln His Gly Glu Pro Ser Leu Gln Arg Val Pro Val Ala Lys Met 545 550 555 560 Val Cys Gly Pro Ser Gly Ser Gln Leu Val Leu Leu Lys Leu Glu Arg 565 570 575 Ser Val Thr Leu Asn Gln Arg Val Ala Leu Ile Cys Leu Pro Pro Glu 580 585 590 Trp Tyr Val Val Pro Pro Gly Thr Lys Cys Glu Ile Ala Gly Trp Gly 595 600 605 Glu Thr Lys Gly Thr Gly Asn Asp Thr Val Leu Asn Val Ala Leu Leu 610 620 Asn Val Ile Ser Asn Gln Glu Cys Asn Ile Lys His Arg Gly Arg Val 625 630 635 640 Arg Glu Ser Glu Met Cys Thr Glu Gly Leu Leu Ala Pro Val Gly Ala 645 650 655 Cys Glu Gly Asp Tyr Gly Gly Pro Leu Ala Cys Phe Thr His Asn Cys 660 665 670 Trp Val Leu Glu Gly Ile Ile Ile Pro Asn Arg Val Cys Ala Arg Ser 675 680 685 Arg Trp Pro Ala Val Phe Thr Arg Val Ser Val Phe Val Asp Trp Ile 690 700

His Lys Val Met Arg Leu Gly 705 710

<210> 52 <211> 711

<212> PRT

<213> Homo sapiens

<400> 52

Met Gly Trp Leu Pro Leu Leu Leu Leu Leu Thr Gln Cys Leu Gly Val 1 5 10 15

Pro Gly Gln Arg Ser Pro Leu Asn Asp Phe Gln Val Leu Arg Gly Thr 20 25 30

Glu Leu Gln His Leu Leu His Ala Val Val Pro Gly Pro Trp Gln Glu 35 40 45

Asp Val Ala Asp Ala Glu Glu Cys Ala Gly Arg Cys Gly Pro Leu Met 50 60

Asp Cys Arg Ala Phe His Tyr Asn Val Ser Ser His Gly Cys Gln Leu 65 70 75 80

Leu Pro Trp Thr Gln His Ser Pro His Thr Arg Leu Arg Arg Ser Gly
85 90 95

Arg Cys Asp Leu Phe Gln Lys Lys Asp Tyr Val Arg Thr Cys Ile Met $100 \hspace{1cm} 105 \hspace{1cm} 110$

Asn Asn Gly Val Gly Tyr Arg Gly Thr Met Ala Thr Thr Val Gly Gly 115 120 125

Leu Pro Cys Gln Ala Trp Ser His Lys Phe Pro Asn Asp His Lys Tyr 130 135 140

Thr Pro Thr Leu Arg Asn Gly Leu Glu Glu Asn Phe Cys Arg Asn Pro 145 150 155 160

Asp Gly Asp Pro Gly Gly Pro Trp Cys Tyr Thr Thr Asp Pro Ala Val 165 170 175

Arg Phe Gln Ser Cys Gly Ile Lys Ser Cys Arg Glu Ala Ala Cys Val 180 185 190

Trp Cys Asn Gly Glu Glu Tyr Arg Gly Ala Val Asp Arg Thr Glu Ser 195 200 205

Gly Arg Glu Cys Gln Arg Trp Asp Leu Gln His Pro His Gln His Pro 210 215 220

Phe Glu Pro Gly Lys Phe Leu Asp Gln Gly Leu Asp Asp Asn Tyr Cys 225 230 235 240

Arg Asn Pro Asp Gly Ser Glu Arg Pro Trp Cys Tyr Thr Thr Asp Pro 245 250 255

Gln Ile Glu Arg Glu Phe Cys Asp Leu Pro Arg Cys Gly Ser Glu Ala 260 270

Gln Pro Arg Gln Glu Ala Thr Thr Val Ser Cys Phe Arg Gly Lys Gly 275 280 285

Glu Gly Tyr Arg Gly Thr Ala Asn Thr Thr Thr Ala Gly Val Pro Cys 290 295 300 Gln Arg Trp Asp Ala Gln Ile Pro His Gln His Arg Phe Thr Pro Glu 305 310 315 320 Lys Tyr Ala Cys Lys Asp Leu Arg Glu Asn Phe Cys Arg Asn Pro Asp 325 330 335 Gly Ser Glu Ala Pro Trp Cys Phe Thr Leu Arg Pro Gly Met Arg Ala 340 345 350 Ala Phe Cys Tyr Gln Ile Arg Arg Cys Thr Asp Asp Val Arg Pro Gln 355 365 Asp Cys Tyr His Gly Ala Gly Glu Gln Tyr Arg Gly Thr Val Ser Lys 370 380 Thr Arg Lys Gly Val Gln Cys Gln Arg Trp Ser Ala Glu Thr Pro His 385 390 395 400 Lys Pro Gln Phe Thr Phe Thr Ser Glu Pro His Ala Gln Leu Glu Glu 415 Asn Phe Cys Arg Asn Pro Asp Gly Asp Ser His Gly Pro Trp Cys Tyr 420 425 430 Thr Met Asp Pro Arg Thr Pro Phe Asp Tyr Cys Ala Leu Arg Arg Cys 435 440 445 Ala Asp Asp Gln Pro Pro Ser Ile Leu Asp Pro Pro Asp Gln Val Gln 450 460 Phe Glu Lys Cys Gly Lys Arg Val Asp Arg Leu Asp Gln Arg Arg Ser 470 475 480 Lys Leu Arg Val Val Gly Gly His Pro Gly Asn Ser Pro Trp Thr Val 485 490 495 Ser Leu Arg Asn Arg Gln Gly Gln His Phe Cys Gly Gly Ser Leu Val 500 505 510 Lys Glu Gln Trp Ile Leu Thr Ala Arg Gln Cys Phe Ser Ser Cys His 515 520 525 Met Pro Leu Thr Gly Tyr Glu Val Trp Leu Gly Thr Leu Phe Gln Asn 530 540 Pro Gln His Gly Glu Pro Ser Leu Gln Arg Val Pro Val Ala Lys Met 545 550 555 560 Val Cys Gly Pro Ser Gly Ser Gln Leu Val Leu Leu Lys Leu Glu Arg 565 570 575 Ser Val Thr Leu Asn Gln Arg Val Ala Leu Ile Cys Leu Pro Pro Glu 580 590 Trp Tyr Val Val Pro Pro Gly Thr Lys Cys Glu Ile Ala Gly Trp Gly 595 600 605 Glu Thr Lys Gly Thr Gly Asn Asp Thr Val Leu Asn Val Ala Phe Leu 620

Asn Val Ile Ser Asn Gln Glu Cys Asn Ile Lys His Arg Gly Arg Val 625 630 640 630 Arg Glu Ser Glu Met Cys Thr Glu Gly Leu Leu Ala Pro Val Gly Ala 645 650 655 Cys Glu Gly Asp Tyr Gly Gly Pro Leu Ala Cys Phe Thr His Asn Cys 660 665 670 Trp Val Leu Glu Gly Ile Ile Ile Pro Asn Arg Val Cys Ala Arg Ser 675 680 685 Arg Trp Pro Ala Val Phe Thr Arg Val Ser Val Phe Val Asp Trp Ile 690 695 700 His Lys Val Met Arg Leu Gly 705 710

<210> 53 <211> 711

<212> PRT

<213> Homo sapiens

<400> 53 Met Gly Trp Leu Pro Leu Leu Leu Leu Thr Gln Tyr Leu Gly Val 1 5 10 15 Pro Gly Gln Arg Ser Pro Leu Asn Asp Phe Gln Val Leu Arg Gly Thr 20 25 30 Glu Leu Gln His Leu Leu His Ala Val Val Pro Gly Pro Trp Gln Glu
35 40 45 Asp Val Ala Asp Ala Glu Glu Cys Ala Gly Arg Cys Gly Pro Leu Met 50 55 60 Asp Cys Arg Ala Phe His Tyr Asn Val Ser Ser His Gly Cys Gln Leu 65 70 75 80 Leu Pro Trp Thr Gln His Ser Pro His Thr Arg Leu Arg Arg Ser Gly 85 90 95 Arg Cys Asp Leu Phe Gln Lys Lys Asp Tyr Val Arg Thr Cys Ile Met $100 \hspace{1cm} 105 \hspace{1cm} 110$ Asn Asn Gly Val Gly Tyr Arg Gly Thr Met Ala Thr Thr Val Gly Gly 115 120 125 Leu Pro Cys Gln Ala Trp Ser His Lys Phe Pro Asn Asp His Lys Tyr 130 135 140 Thr Pro Thr Leu Arg Asn Gly Leu Glu Glu Asn Phe Cys Arg Asn Pro 145 150 155 160 Asp Gly Asp Pro Gly Gly Pro Trp Cys Tyr Thr Thr Asp Pro Ala Val 165 170 175 Arg Phe Gln Ser Cys Gly Ile Lys Ser Cys Arg Glu Ala Ala Cys Val 180 185 190

Trp Cys Asn Gly Glu Glu Tyr Arg Gly Ala Val Asp Arg Thr Glu Ser

Page 91

Gly Arg Glu Cys Gln Arg Trp Asp Leu Gln His Pro His Gln His Pro 210 215 220 Phe Glu Pro Gly Lys Phe Leu Asp Gln Gly Leu Asp Asp Asn Tyr Cys 235 230 235 240 Arg Asn Pro Asp Gly Ser Glu Arg Pro Trp Cys Tyr Thr Thr Asp Pro 245 250 255 Gln Ile Glu Arg Glu Phe Cys Asp Leu Pro Arg Cys Gly Ser Glu Ala 260 265 270 Gln Pro Arg Gln Glu Ala Thr Thr Val Ser Cys Phe Arg Gly Lys Gly 275 280 285 Glu Gly Tyr Arg Gly Thr Ala Asn Thr Thr Ala Gly Val Pro Cys 290 295 300 Gln Arg Trp Asp Ala Gln Ile Pro His Gln His Arg Phe Thr Pro Glu 305 310 315 320 Lys Tyr Ala Cys Lys Asp Leu Arg Glu Asn Phe Cys Arg Asn Pro Asp 325 330 335 Gly Ser Glu Ala Pro Trp Cys Phe Thr Leu Arg Pro Gly Met Arg Ala 340 350 Ala Phe Cys Tyr Gln Ile Arg Arg Cys Thr Asp Asp Val Arg Pro Gln 355 360 365 Asp Cys Tyr His Gly Ala Gly Glu Gln Tyr Arg Gly Thr Val Ser Lys 370 380 Thr Arg Lys Gly Val Gln Cys Gln Arg Trp Ser Ala Glu Thr Pro His 385 390 395 400 Lys Pro Gln Phe Thr Phe Thr Ser Glu Pro His Ala Gln Leu Glu Glu 415 Asn Phe Cys Arg Asn Pro Asp Gly Asp Ser His Gly Pro Trp Cys Tyr 420 425 430 Thr Met Asp Pro Arg Thr Pro Phe Asp Tyr Cys Ala Leu Arg Arg Cys 435 440 445Ala Asp Asp Gln Pro Pro Ser Ile Leu Asp Pro Pro Asp Gln Val Gln 450 460 Phe Glu Lys Cys Gly Lys Arg Val Asp Arg Leu Asp Gln Arg Arg Ser 470 475 480 Lys Leu Arg Val Val Gly Gly His Pro Gly Asn Ser Pro Trp Thr Val 485 490 495 Ser Leu Arg Asn Arg Gln Gly Gln His Phe Cys Gly Gly Ser Leu Val 500 505 510 Lys Glu Gln Trp Ile Leu Thr Ala Arg Gln Cys Phe Ser Ser Cys His 515 520 525 Met Pro Leu Thr Gly Tyr Glu Val Trp Leu Gly Thr Leu Phe Gln Asn Page 92

 Pro 545
 Gln His Gly Glu Pro 550
 Ser Leu Gln Arg 555
 Pro Val Ala Lys Met 560

 Val Cys Gly Pro 565
 Gly Ser Gln Leu S70
 Leu Leu Lys Leu Glu Arg 575
 Arg 575

 Ser Val Thr Leu Asn 580
 Asn Gln Arg Val Ala Leu Ile Cys Leu Pro 590
 Pro Glu 580

 Trp Tyr Yal Val Val Pro Pro 61y Thr Gly Asn Asn Asn Thr Val Leu Asn Val Ala Gly Trp Gly 600
 Asn Val Ile Ser Asn 61n Glu Cys Asn Ile Lys His Arg Gly Arg 640

 Asn Glu Ser Glu Met 645
 Cys Thr Glu Gly Gly Leu Ala Pro Val Gly Arg 640

 Arg Glu Gly Asp Tyr Gly Gly Pro 665
 Asn Arg Clu Gly Fro 670

 Trp Val Leu Glu Gly Ile Ile Ile G860
 Pro Asn Arg Val Cys Ala Arg Ser 685

 Arg Trp Pro Ala Val Phe Thr 695
 Arg Val Ser Val Phe Val Asp Trp Ile 695

535

<210> 54 <211> 529 <212> PRT

<213> Homo sapiens

<400> 54

Met Asp Cys Arg Ala Phe His Tyr Asn Val Ser Ser His Gly Cys Gln
1 5 10 15

Leu Leu Pro Trp Thr Gln His Ser Pro His Thr Arg Leu Arg His Ser 20 25 30

Gly Arg Cys Asp Leu Phe Gln Glu Lys Asp Tyr Ile Arg Thr Cys Ile 35 40 45

Met Asn Asn Gly Val Gly Tyr Arg Gly Thr Met Ala Thr Thr Val Gly 50 60

Gly Leu Ser Cys Gln Ala Trp Ser His Lys Phe Pro Asn Asp His Gln 65 70 75 80

Tyr Met Pro Thr Leu Arg Asn Gly Leu Glu Glu Asn Phe Cys Arg Asn 85 90 95

Pro Asp Gly Asp Pro Gly Gly Pro Trp Cys His Thr Thr Asp Pro Ala 100 105 110

Cura 468 SEQ list 0705 Val Arg Phe Gln Ser Cys Gly Ile Lys Ser Cys Arg Val Ala Ala Cys 115 120 125 Val Trp Cys Asn Gly Glu Glu Tyr Arg Gly Ala Val Asp Arg Thr Glu 130 135 140 Ser Gly Arg Glu Cys Gln Arg Trp Asp Leu Gln His Pro His Gln His 145 150 155 160 Pro Phe Glu Pro Gly Lys Phe Leu Asp Gln Gly Leu Asp Asp Asn Tyr 165 170 175 Cys Arg Asn Pro Asp Gly Ser Glu Arg Pro Trp Cys Tyr Thr Thr Asp 180 185 190 Pro Gln Ile Glu Arg Glu Phe Cys Asp Leu Pro Arg Cys Gly Ser Glu 195 200 205 Ala Gln Pro Arg Gln Glu Ala Thr Ser Val Ser Cys Phe Arg Gly Lys 210 220 Gly Glu Gly Tyr Arg Gly Thr Ala Asn Thr Thr Thr Ala Gly Val Pro 235 240 Cys Gln Arg Trp Asp Ala Gln Ile Pro His Gln His Arg Phe Thr Pro 245 250 255 Glu Lys Tyr Ala Cys Lys Asp Leu Arg Glu Asn Phe Cys Arg Asn Pro 260 265 270 Asp Gly Ser Glu Ala Pro Trp Cys Phe Thr Leu Arg Pro Gly Met Arg 275 280 285 Val Gly Phe Cys Tyr Gln Ile Arg Arg Cys Thr Asp Asp Val Arg Pro 290 295 300 Gln Asp Cys Tyr His Gly Ala Gly Glu Gln Tyr Arg Gly Thr Val Ser 305 310 315 320 Lys Thr Arg Lys Gly Val Gln Cys Gln Arg Gly Ser Ala Glu Thr Pro 325 330 335 His Lys Pro Gln Phe Thr Phe Thr Ser Glu Pro His Ala Gln Leu Glu 340 350 Glu Asn Phe Cys Gln Thr Gln Met Gly Ile Ala Met Gly Pro Gly Ala 355 360 365 Thr Arg Trp Thr Gln Gly Pro His Ser Thr Thr Val Pro Cys Asp Ala 370 375 380 Ala Leu Met Thr Ser Arg His Gln Ser Trp Thr Pro Gln Thr Arg Cys 385 390 395 400 Ser Leu Arg Ser Val Ala Arg Gly Trp Ile Gly Trp Ile Ser Val Val 405 410 415 Pro Ser Cys Ala Trp Leu Gly Ala Ile Arg Ala Thr His Pro Gly Gln 420 425 430 Ser Ala Cys Gly Ile Gly Gln Gly Gln His Phe Cys Gly Gly Ser Leu 435 440 445

Val Lys Glu Gln Trp Ile Leu Thr Ala Arg Gln Cys Phe Ser Ser Cys 450

His Met Pro Leu Thr Gly Tyr Glu Val Trp Leu Gly Thr Leu Phe Gln 480

Asn Pro Gln His Gly Glu Pro Gly Leu Gln Arg Val Pro Val Ala Lys 495

Met Leu Cys Gly Pro Ser Gly Ser Gln Leu Val Leu Leu Lys Leu Glu S10

Arg Ser Val Thr Leu Asn Gln Arg Val Ala Leu Ile Cys Leu Pro Pro Glu

<210> 55 <211> 716 <212> PRT

<213> Mus musculus

<400> 55 Met Gly Trp Leu Pro Leu Leu Leu Leu Leu Val Gln Cys Ser Arg Ala 1 5 10 15 Leu Gly Gln Arg Ser Pro Leu Asn Asp Phe Gln Leu Phe Arg Gly Thr 20 25 30 Glu Leu Arg Asn Leu Leu His Thr Ala Val Pro Gly Pro Trp Gln Glu 35 40 45 Asp Val Ala Asp Ala Glu Glu Cys Ala Arg Arg Cys Gly Pro Leu Leu 50 60 Asp Cys Arg Ala Phe His Tyr Asn Met Ser Ser His Gly Cys Gln Leu 65 70 75 80 Leu Pro Trp Thr Gln His Ser Leu His Thr Gln Leu Tyr His Ser Ser 85 90 95 Leu Cys His Leu Phe Gln Lys Lys Asp Tyr Val Arg Thr Cys Ile Met 100 105 110 Asp Asn Gly Val Ser Tyr Arg Gly Thr Val Ala Arg Thr Ala Gly Gly 115 125 Leu Pro Cys Gln Ala Trp Ser Arg Arg Phe Pro Asn Asp His Lys Tyr 130 135 140 Thr Pro Thr Pro Lys Asn Gly Leu Glu Glu Asn Phe Cys Arg Asn Pro
145 150 155 160 Asp Gly Asp Pro Arg Gly Pro Trp Cys Tyr Thr Thr Asn Arg Ser Val 165 170 175 Arg Phe Gln Ser Cys Gly Ile Lys Thr Cys Arg Glu Ala Val Cys Val 180 185 190 Leu Cys Asn Gly Glu Asp Tyr Arg Gly Glu Val Asp Val Thr Glu Ser 195 200 205 Page 95

Gly Arg Glu Cys Gln Arg Trp Asp Leu Gln His Pro His Ser His Pro 210 220 Phe Gln Pro Glu Lys Phe Leu Asp Lys Asp Leu Lys Asp Asn Tyr Cys 235 230 235 Arg Asn Pro Asp Gly Ser Glu Arg Pro Trp Cys Tyr Thr Thr Asp Pro 245 250 255 Asn Val Glu Arg Glu Phe Cys Asp Leu Pro Ser Cys Gly Pro Asn Leu 265 270 Pro Pro Thr Val Lys Gly Ser Lys Ser Gln Arg Arg Asn Lys Gly Lys 275 280 285 Ala Leu Asn Cys Phe Arg Gly Lys Gly Glu Asp Tyr Arg Gly Thr Thr 290 295 300 Asn Thr Thr Ser Ala Gly Val Pro Cys Gln Arg Trp Asp Ala Gln Ser 315 310 315 Pro His Gln His Arg Phe Val Pro Glu Lys Tyr Ala Cys Lys Asp Leu 325 330 335 Arg Glu Asn Phe Cys Arg Asn Pro Asp Gly Ser Glu Ala Pro Trp Cys 340 350 Phe Thr Ser Arg Pro Gly Leu Arg Met Ala Phe Cys His Gln Ile Pro 355 360 365 Arg Cys Thr Glu Glu Leu Val Pro Glu Gly Cys Tyr His Gly Ser Gly 370 375 380 Glu Gln Tyr Arg Gly Ser Val Ser Lys Thr Arg Lys Gly Val Gln Cys 385 390 395 400 Gln His Trp Ser Ser Glu Thr Pro His Lys Pro Gln Phe Thr Pro Thr 405 410 415 Ser Ala Pro Gln Ala Gly Leu Glu Ala Asn Phe Cys Arg Asn Pro Asp 420 425 430 Gly Asp Ser His Gly Pro Trp Cys Tyr Thr Leu Asp Pro Asp Ile Leu 435 440 445 Phe Asp Tyr Cys Ala Leu Gln Arg Cys Asp Asp Gln Pro Pro Ser 450 455 460 Ile Leu Asp Pro Pro Asp Gln Val Val Phe Glu Lys Cys Gly Lys Arg 475 480 Val Asp Lys Ser Asn Lys Leu Arg Val Val Gly Gly His Pro Gly Asn 485 490 495 Ser Pro Trp Thr Val Ser Leu Arg Asn Arg Gln Gly Gln His Phe Cys 500 505 510 Gly Gly Ser Leu Val Lys Glu Gln Trp Val Leu Thr Ala Arg Gln Cys 515 525 Ile Trp Ser Cys His Glu Pro Leu Thr Gly Tyr Glu Val Trp Leu Gly 530 540

 Thr 545
 Ile Asn Gln Asn Pro 550
 Gln Pro Gly Gly Gly Str S55
 Asn Leu Gln Arg S60
 Arg S60

 Pro Val Ala Lys Ala Lys S65
 Val Cys Gly Pro S70
 Gly Ser Gln Leu Val Leu S75
 Leu Lys Leu Glu Arg Pro Val Ile S85
 Asn His His Val Ala Leu S90
 Leu Ile S95

 Leu Lys Leu Pro S80
 Arg Pro Val Glu Gln Tyr Val S85
 Asn His His Val Ala Leu S90
 Leu Pro S95
 Cys Glu Glu Gln Tyr Val S85
 Asn His His Val Ala Leu S90
 Leu S90
 Cys Glu Glu Gln Tyr Val S85
 Asn Fro S80
 Asn Thr Val Leu S90
 Glu G15
 Fro S85
 Asn G10
 Tyr S80
 Asn Thr Val Leu G10
 Fro S85
 Asn G10
 Fro S80
 Asn Thr Val Leu G10
 Fro S85
 Asn G10
 Fro S85
 Asn G10
 Fro S85
 Fro S85
 Asn G10
 Fro S85
 Fro S85
 Asn Fro S80
 Fro S85
 Fro S85
 Asn Fro S90
 Fro S90

Met Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Val Asp Ser 1 5 10 15

Lys Gly Phe Asp Glu Tyr Met Lys Glu Leu Gly Val Gly Ile Ala Leu 20 25 30

Arg Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Val Thr Cys Asp 35 40 45

Gly Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln .50 60

Phe Ser Cys Pro Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly 65 70 75 80

Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln 85 90 95

His Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys $100 \hspace{1cm} 105 \hspace{1cm} 110$

Asp Gly Lys Leu Val Val Glu Cys Val Met Asn His Val Ala Cys Thr Page 97

<210> 56

<211> 135

<212> PRT

<213> Homo sapiens

<400>_56

Arg Ile Tyr Glu Lys Val Glu 130 135

<210> 57

<211> 135 <212> PRT

<213> Homo sapiens

<400> 57

Met Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Val Asp Ser

Lys Gly Phe Asp Glu Tyr Met Lys Glu Leu Gly Val Gly Ile Ala Leu 20 25 30

Arg Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp 40 45

Gly Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln 50 60

Phe Ser Cys Thr Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly 65 70 75 80

Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln $85 \hspace{1cm} 90 \hspace{1cm} 95$

His Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys 100 105 110

Asp Gly Lys Leu Val Val Glu Cys Val Met Asn Asn Val Thr Cys Thr 115 120 125

Arg Ile Tyr Glu Lys Val Glu 130 135

<210> 58

<211> 135

<212> PRT

<213> Homo sapiens

<400> 58

Met Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Val Asp Ser 1 5 10 15

Arg Gly Phe Asp Glu Tyr Val Lys Glu Leu Gly Val Gly Ile Ala Leu 20 25 30

Arg Lys Met Asp Thr Ile Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp 45

Gly Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln 50 60

Phe Ser Cys Thr Leu Gly Glu Asn Phe Glu Glu Thr Thr Ala Asp Gly 65 70 75 80

Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln
85 90 95

His Gln Glu Trp Asp Gly Lys Glu Asn Thr Ile Arg Arg Lys Leu Lys 100 Asp Gly Lys Leu Val Val Asp Cys Val Met Asn Ser Val Thr Cys Thr 116 Tyr Glu Lys Val Glu 135

<210> 59 <211> 135 <212> PRT <213> Homo sapiens

Lys Gly Phe Asp Glu Tyr Met Lys Glu Leu Gly Val Gly Ile Ala Leu 20 25 30

Gln Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp 40 45

Gly Arg Asn Leu Thr Thr Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln 50 60

Phe Ser Cys Thr Leu Gly Asp Glu Phe Glu Glu Thr Thr Ala Asp Gly 65 70 75 80

Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln 85 90 95

His Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Lys 100 105 110

Asp Gly Lys Leu Val Val Glu Cys Val Met Asn Asn Val Thr Cys Thr 115 120 125

Arg Ile Tyr Glu Lys Val Glu 130 135

<210> 60 <211> 135 <212> PRT

<213> Bos taurus

Gly Lys Asn Leu Ser Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln 50 60

Phe Ser Cys Lys Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly 80

Arg Lys Thr Gln Thr Val Cys Asn Phe Thr Asp Gly Ala Leu Val Gln 95

His Gln Glu Trp Asp Gly Lys Glu Ser Thr Ile Thr Arg Lys Leu Glu 110

Asp Gly Lys Leu Val Val Val Cys Val Met Asn Asn Val Thr Cys Thr 130

Arg Val Tyr Glu Lys Val Glu 135

<210> 61 <211> 266 <212> PRT <213> Homo sapiens

<400> 61 Met Asn Trp Ala Phe Leu Gln Gly Leu Leu Ser Gly Val Asn Lys Tyr 1 5 10 15 Ser Thr Val Leu Ser Arg Ile Trp Leu Ser Val Val Phe Ile Phe Arg 20 25 30 Val Leu Val Tyr Val Val Ala Ala Glu Glu Val Trp Asp Asp Glu Gln
35 40 45 Lys Asp Phe Val Cys Asn Thr Lys Gln Pro Gly Cys Pro Asn Val Cys 50 60 Tyr Asp Glu Phe Phe Pro Val Ser His Val Arg Leu Trp Ala Leu Gln 65 70 75 80 Leu Ile Leu Val Thr Cys Pro Ser Leu Leu Val Val Met His Val Ala 85 90 95 Tyr Arg Glu Glu Arg Glu Arg Lys His His Leu Lys His Gly Pro Asn 100 105 110 Ala Pro Ser Leu Tyr Asp Asn Leu Ser Lys Lys Arg Gly Gly Leu Trp 115 120 125 Trp Thr Tyr Leu Leu Ser Leu Ile Phe Lys Ala Ala Val Asp Ala Gly 130 135 140 Phe Leu Tyr Ile Phe His Arg Leu Tyr Lys Asp Tyr Asp Met Pro Arg 145 150 155 160 Val Val Ala Cys Ser Val Glu Pro Cys Pro His Thr Val Asp Cys Tyr 165 170 175 Ile Ser Arg Pro Thr Glu Lys Lys Val Phe Thr Tyr Phe Met Val Thr 180 185 190 Thr Ala Ala Ile Cys Ile Leu Leu Asn Leu Ser Glu Val Phe Tyr Leu 195 200 205 Val Gly Lys Arg Cys Met Glu Ile Phe Gly Pro Arg His Arg Arg Pro 210 215 220

Arg Cys Arg Glu Cys Leu Pro Asp Thr Cys Pro Pro Tyr Val Leu Ser 240

Gln Gly Gly His Pro Glu Asp Gly Asn Ser Val Leu Met Lys Ala Gly 255

Ser Ala Pro Val Asp Ala Gly Gly Tyr Pro 265

<210> 62 <211> 265 <212> PRT <213> Rattus norvegicus

<400> 62 Met Asn Trp Gly Phe Leu Gln Gly Ile Leu Ser Gly Val Asn Lys Tyr 1 5 10 15 Ser Thr Ala Leu Gly Arg Ile Trp Leu Ser Val Val Phe Ile Phe Arg 20 25 30 Val Leu Val Tyr Val Val Ala Ala Glu Glu Val Trp Asp Asp Glu Gln
35 40 45 Lys Asp Phe Ile Cys Asn Thr Lys Gln Pro Gly Cys Pro Asn Val Cys 50 60 Tyr Asp Glu Phe Phe Pro Val Ser His Val Arg Leu Trp Ala Leu Gln 65 70 75 80 Leu Ile Leu Val Thr Cys Pro Ser Leu Leu Val Val Met His Val Ala 85 90 95 Tyr Arg Glu Glu Arg Glu Arg Lys His Arg Leu Lys His Gly Pro Asp 100 105 110 Ala Pro Ala Leu Tyr Ser Asn Leu Ser Lys Lys Arg Gly Gly Leu Trp 115 120 125 Trp Thr Tyr Leu Leu Ser Leu Ile Phe Lys Ala Ala Val Asp Ser Gly 130 135 140 Phe Leu Tyr Ile Phe His Cys Ile Tyr Lys Asp Tyr Asp Met Pro Arg 145 150 155 160 Val Val Ala Cys Ser Val Gln Pro Cys Pro His Thr Val Asp Cys Tyr 165 170 175 Ile Ser Arg Pro Thr Glu Lys Lys Val Phe Thr Tyr Phe Met Val Val 180 185 190 Thr Ala Ala Ile Cys Ile Leu Leu Asn Leu Ser Glu Val Ala Tyr Leu 195 200 205 Val Gly Lys Arg Cys Met Glu Val Phe Arg Pro Arg Arg Gln Lys Thr 210 215 220 Ser Arg Arg His Gln Leu Pro Asp Thr Cys Pro Pro Tyr Val Ile Ser 235 230 235 Lys Gly His Pro Gln Asp Glu Ser Thr Val Leu Thr Lys Ala Gly Met Page 101

Ala Thr Val Asp Ala Gly Val Tyr Pro 260 265

<210> 63 <211> 266

<212> PRT

<213> Mus musculus

Ser Thr Ala Leu Gly Arg Ile Trp Leu Ser Val Val Phe Ile Phe Arg 20 25 30

Val Leu Val Tyr Val Val Ala Ala Glu Glu Val Trp Asp Asp Asp Gln 35 40

Lys Asp Phe Ile Cys Asn Thr Lys Gln Pro Gly Cys Pro Asn Val Cys 50 60

Tyr Asp Glu Phe Phe Pro Val Ser His Val Arg Leu Trp Ala Leu Gln 65 70 75 80

Leu Ile Leu Val Thr Cys Pro Ser Leu Leu Val Val Met His Val Ala 85 90 95

Tyr Arg Glu Glu Arg Glu Arg Lys His Arg Leu Lys His Gly Pro Asn 100 105 110

Ala Pro Ala Leu Tyr Ser Asn Leu Ser Lys Lys Arg Gly Gly Leu Trp 115 120 125

Trp Thr Tyr Leu Leu Ser Leu Ile Phe Lys Ala Ala Val Asp Ser Gly 130 135 140

Phe Leu Tyr Ile Phe His Cys Ile Tyr Lys Asp Tyr Asp Met Pro Arg 145 150 155 160

Val Val Ala Cys Ser Val Thr Pro Cys Pro His Thr Val Asp Cys Tyr 165 170 175

Ile Ala Arg Pro Thr Glu Lys Lys Val Phe Thr Tyr Phe Met Val Val 180 185 190

Thr Ala Ala Ile Cys Ile Leu Leu Asn Leu Ser Glu Val Val Tyr Leu 195 200 205

Val Gly Lys Arg Cys Met Glu Val Phe Arg Pro Arg Arg Arg Lys Ala 210 215 220

Ser Arg Arg His Gln Leu Pro Asp Thr Cys Pro Pro Tyr Val Ile Ser 235 235 240

Lys Gly Gly His Pro Gln Asp Glu Ser Val Ile Leu Thr Lys Ala Gly 245 250 255

Met Ala Thr Val Asp Ala Gly Val Tyr Pro 260 265

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<210> 64
<211> 273
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<212> PRT

<213> Homo sapiens

<400> 64

Met Asn Trp Ser Ile Phe Glu Gly Leu Leu Ser Gly Val Asn Lys Tyr 1 5 10 15

Ser Thr Ala Phe Gly Arg Ile Trp Leu Ser Leu Val Phe Ile Phe Arg 20 25 30

Val Leu Val Tyr Leu Val Thr Ala Glu Arg Val Trp Ser Asp Asp His 35 40 45

Lys Asp Phe Asp Cys Asn Thr Arg Gln Pro Gly Cys Ser Asn Val Cys 50 55 60

Phe Asp Glu Phe Phe Pro Val Ser His Val Arg Leu Trp Ala Leu Gln 65 70 75 80

Leu Ile Leu Val Thr Cys Pro Ser Leu Leu Val Val Met His Val Ala 85 90 95

Tyr Arg Glu Val Gln Glu Lys Arg His Arg Glu Ala His Gly Glu Asn 100 105 110

Ser Gly Arg Leu Tyr Leu Asn Pro Gly Lys Lys Arg Gly Gly Leu Trp 115 120 125

Trp Thr Tyr Val Cys Ser Leu Val Phe Lys Ala Ser Val Asp Ile Ala 130 140

Phe Leu Tyr Val Phe His Ser Phe Tyr Pro Lys Tyr Ile Leu Pro Pro 145 150 155 160

Val Val Lys Cys His Ala Asp Pro Cys Pro Asn Ile Val Asp Cys Phe 165 170 175

Ile Ser Lys Pro Ser Glu Lys Asn Ile Phe Thr Leu Phe Met Val Ala $180 \hspace{1cm} 185 \hspace{1cm} 190$

Thr Ala Ala Ile Cys Ile Leu Leu Asn Leu Val Glu Leu Ile Tyr Leu 195 200 205

Val Ser Lys Arg Cys His Glu Cys Leu Ala Ala Arg Lys Ala Gln Ala 210 215 220

Met Cys Thr Gly His His Pro His Gly Thr Thr Ser Ser Cys Lys Gln 225 230 235 240

Asp Asp Leu Leu Ser Gly Asp Leu Ile Phe Leu Gly Ser Asp Ser His 245 250 255

Pro Pro Leu Leu Pro Asp Arg Pro Arg Asp His Val Lys Lys Thr Ile 260 265 270

Leu

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<211> 273
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<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (41)

<223> Wherein Xaa is any amino acid.

<400> 65

Met Asn Trp Ser Ile Phe Glu Gly Leu Leu Ser Gly Val Asn Lys Tyr 1 5 10 15

Ser Thr Ala Phe Gly Arg Ile Trp Leu Ser Leu Val Phe Ile Phe Arg 20 25 30

Val Leu Val Tyr Leu Val Thr Ala Xaa Arg Val Trp Ser Asp Asp His 35 40 45

Lys Asp Phe Asp Cys Asn Thr Arg Gln Pro Gly Cys Ser Asn Val Cys 50 60

Phe Asp Glu Phe Phe Pro Val Ser His Val Arg Leu Trp Ala Leu Gln 65 70 75 80

Leu Ile Leu Val Thr Cys Pro Ser Leu Leu Val Val Met His Val Ala 85 90 95

Tyr Arg Glu Val Gln Glu Lys Arg His Arg Glu Ala His Gly Glu Asn 100 105 110

Ser Gly Arg Leu Tyr Leu Asn Pro Gly Lys Lys Arg Gly Gly Leu Trp 115 120 125

Trp Thr Tyr Val Cys Ser Leu Val Phe Lys Ala Ser Val Asp Ile Ala 130 135 140

Phe Leu Tyr Val Phe His Ser Phe Tyr Pro Lys Tyr Ile Leu Pro Pro 145 150 155 160

Val Val Lys Cys His Ala Asp Pro Cys Pro Asn Ile Val Asp Cys Phe 165 170 175

Ile Ser Lys Pro Ser Glu Lys Asn Ile Phe Thr Leu Phe Met Val Ala 180 185 190

Thr Ala Ala Ile Cys Ile Leu Leu Asn Leu Val Glu Leu Ile Tyr Leu 195 200 205

Val Ser Lys Arg Cys His Glu Cys Leu Ala Ala Arg Lys Ala Gln Ala 210 215 220

Met Cys Thr Gly His His Pro His Gly Thr Thr Ser Ser Cys Lys Gln 225 230 235 240

Asp Asp Leu Leu Ser Gly Asp Leu Ile Phe Leu Gly Ser Asp Ser His 245 250 255

Pro Pro Leu Leu Pro Asp Arg Pro Arg Asp His Val Lys Lys Thr Ile 260 265 270

Leu

<210> 66 <211> 434 <212> PRT <213> Homo sapiens <400> 66 Ala Lys Gln Gln Leu Asn Leu Arg Thr His Met Ala Asp Glu Asn Lys
1 10 15 Asn Glu Tyr Ala Ala Gln Leu Gln Asn Phe Asn Gly Glu Gln His Lys 20 25 30 His Phe Tyr Val Val Ile Pro Gln Ile Tyr Lys Gln Leu Gln Glu Met 35 40 45 Asp Glu Arg Arg Thr Ile Lys Leu Ser Glu Cys Tyr Arg Gly Phe Ala 50 60 Asp Ser Glu Arg Lys Val Ile Pro Ile Ile Ser Lys Cys Leu Glu Gly 65 70 75 80 Met Ile Leu Ala Ala Lys Ser Val Asp Glu Arg Arg Asp Ser Gln Met $85 \hspace{1cm} 90 \hspace{1cm} 95$ Val Val Asp Ser Phe Lys Ser Gly Phe Glu Pro Pro Gly Asp Phe Pro 100 105 110Phe Glu Asp Tyr Ser Gln His Ile Tyr Arg Thr Ile Ser Asp Gly Thr 115 120 125 Ile Ser Ala Ser Lys Gln Glu Ser Gly Lys Met Asp Ala Lys Thr Thr 130 135 140 Gly Lys Ala Lys Gly Lys Leu Trp Leu Phe Gly Lys Lys Pro Lys 150 155 160 Pro Gln Ser Pro Pro Leu Thr Pro Thr Ser Leu Phe Thr Ser Ser Thr 165 170 175 Pro Asn Gly Ser Gln Phe Leu Thr Phe Ser Ile Glu Pro Val His Tyr 180 185 190 Cys Met Asn Glu Ile Lys Thr Gly Lys Pro Arg Ile Pro Ser Phe Arg 195 200 205 Ser Leu Lys Arg Gly Gly Pro Ala Leu Glu Asp Phe Ser His Leu Pro 210 215 220 Pro Glu Gln Arg Arg Lys Lys Leu Gln Gln Arg Ile Asp Glu Leu Asn 225 230 235 240 Arg Glu Leu Gln Lys Glu Ser Asp Gln Lys Asp Ala Leu Asn Lys Met 245 250 255 Lys Asp Val Tyr Glu Lys Asn Pro Gln Met Gly Asp Pro Gly Ser Leu 260 265 270 Gln Pro Lys Leu Ala Glu Thr Met Asn Asn Ile Asp Arg Leu Arg Met 275 280 285 Glu Ile His Lys Asn Glu Ala Trp Leu Ser Glu Val Glu Gly Lys Thr

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Gly Gly Arg Gly Asp Asp Arg His Ser Ser Asp Ile Asn His Leu Val 320

Thr Gln Gly Arg Glu Ser Pro Glu Gly Ser Tyr Thr Asp Asp Ala Asn 335

Gln Glu Val Arg Gly Pro Pro Gln Gln Gly His Gly His His Asn Glu Phe 350

Asp Asp Glu Phe Glu Asp Asp Asp Asp Asp Pro Leu Pro Ala Ile Gly His Cys 370

Lys Ala Ile Tyr Pro Phe Asp Gly His Asn Glu Gly Thr Leu Ala Met Sys Glu Gly Gly Glu Val Leu Tyr Ile Ile Glu Gly Gly Tyr Val Asp Gly Asp Gly Thr Leu Ala Met Ile Tyr Thr Arg Ala Arg Arg Gln Asn Gly Gly Glu Gly Tyr Val Pro Thr Arg Ile Asp Val Thr Leu Glu Lys Asn Ser Lys Gly Ala Val Thr Tyr Ile

Tyr Ile

<210> 67 <211> 330 <212> PRT <213> Homo sapiens

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Glu Lys Asn Pro Gln Met Gly Asp Pro Gly Ser Leu Gln Pro Lys Leu 165 170 175

Ala Glu Thr Met Asn Asn Ile Asp Arg Leu Arg Met Glu Ile His Lys 180 185 190

Asn Glu Ala Trp Leu Ser Glu Val Glu Gly Lys Thr Gly Gly Arg Gly 195 200 205

Asp Arg Arg His Ser Ser Asp Ile Asn His Leu Val Thr Gln Gly Arg 210 215 220

Glu Ser Pro Glu Gly Ser Tyr Thr Asp Asp Ala Asn Gln Glu Val Arg 225 230 235 240

Gly Pro Pro Gln Gln His Gly His His Asn Glu Phe Asp Asp Glu Phe 245 250 255

Glu Asp Asp Pro Leu Pro Ala Ile Gly His Cys Lys Ala Ile Tyr 260 265 270

Pro Phe Asp Gly His Asn Glu Gly Thr Leu Ala Met Lys Glu Gly Glu 275 280 285

Val Leu Tyr Ile Ile Glu Glu Asp Lys Gly Asp Gly Trp Thr Arg Ala 290 295 300

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Val Thr Leu Glu Lys Asn Ser Lys Gly Ser 325 330

<210> 68

<211> 592

<212> PRT

<213> Homo sapiens

Met Ser Trp Gly Thr Glu Leu Trp Asp Gln Phe Asp Asn Leu Glu Lys
1 5 10 15

His Thr Gln Trp Gly Ile Asp Ile Leu Glu Lys Tyr Ile Lys Phe Val 20 25 30

Lys Glu Arg Thr Glu Ile Glu Leu Ser Tyr Ala Lys Gln Leu Arg Asn 35 40 45

Leu Ser Lys Lys Tyr Gln Pro Lys Lys Asn Ser Lys Glu Glu Glu 50 55

Tyr Lys Tyr Thr Ser Cys Lys Ala Phe Ile Ser Asn Leu Asn Glu Met 65 70 75 80

Asn Asp Tyr Ala Gly Gln His Glu Val Ile Ser Glu Asn Met Ala Ser 90 95

Gln Ile Ile Val Asp Leu Ala Arg Tyr Val Gln Glu Leu Lys Gln Glu
100 105 110

Arg Lys Ser Asn Phe His Asp Gly Arg Lys Ala Gln Gln His Ile Glu 115 120 125 Thr Cys Trp Lys Gln Leu Glu Ser Ser Lys Arg Arg Phe Glu Arg Asp 130 135 140 Cys Lys Glu Ala Asp Arg Ala Gln Gln Tyr Phe Glu Lys Met Asp Ala 145 150 155 160 Asp Ile Asn Val Thr Lys Ala Asp Val Glu Lys Ala Arg Gln Gln Ala 165 170 175 Gln Ile Arg His Gln Met Ala Glu Asp Ser Lys Ala Asp Tyr Ser Ser 180 185 190 Ile Leu Gln Lys Phe Asn His Glu Gln His Glu Tyr Tyr His Thr His 195 200 205 Ile Pro Asn Ile Phe Gln Lys Ile Gln Glu Met Glu Glu Arg Arg Ile 210 215 220 Val Arg Met Gly Glu Ser Met Lys Thr Tyr Ala Glu Val Asp Arg Gln 225 230 235 240 Val Ile Pro Ile Ile Gly Lys Cys Leu Asp Gly Ile Val Lys Ala Ala 245 250 255 Glu Ser Ile Asp Gln Lys Asn Asp Ser Gln Leu Val Ile Glu Ala Tyr 260 265 270Lys Ser Gly Phe Glu Pro Pro Gly Asp Ile Glu Phe Glu Asp Tyr Thr 275 280 285 Gln Pro Met Lys Arg Thr Val Ser Asp Asn Ser Leu Ser Asn Ser Arg 290 295 300 Gly Glu Gly Lys Pro Asp Leu Lys Phe Gly Gly Lys Ser Lys Gly Lys 315 310 315 320Leu Trp Pro Phe Ile Lys Lys Asn Lys Ser Pro Lys Gln Gln Lys Glu 325 330 335 Pro Leu Ser His Arg Phe Asn Glu Phe Met Thr Ser Lys Pro Lys Ile $340 \hspace{1.5cm} 345 \hspace{1.5cm} 350$ His Cys Phe Arg Ser Leu Lys Arg Gly Leu Ser Leu Lys Leu Gly Ala 355 360 365 Thr Pro Glu Asp Phe Ser Asn Leu Pro Pro Glu Gln Arg Arg Lys Lys 370 375 380 Leu Gln Gln Lys Val Asp Glu Leu Asn Lys Glu Ile Gln Lys Glu Met 385 390 395 400 Asp Gln Arg Asp Ala Ile Thr Lys Met Lys Asp Val Tyr Leu Lys Asn 405 410 415 Pro Gln Met Gly Asp Pro Ala Ser Leu Asp His Lys Leu Ala Glu Val 420 425 430 Ser Gln Asn Ile Glu Lys Leu Arg Val Glu Thr Gln Lys Phe Glu Ala 435 440 445

Trp Leu Ala Glu Val Glu Gly Arg Leu Pro Ala Arg Asn Glu Gln Ala
Arg Arg Gln Ser Gly Leu Tyr Asp Ser Gln Asn Pro Pro Thr Val Asn
Asn Cys Ala Gln Asp Arg Glu Ser Glu Met Lys Val Leu Ala Thr Asp Phe Asp Asp
Glu Phe Asp Asp Glu Glu Pro Leu Pro Ala Ile Gly Thr Cys Lys Ala
Leu Tyr Thr Phe Glu Gly Gln Asn Glu Gly Thr Ile Ser Val Val Glu
Gly Glu Thr Leu Tyr Val Ile Glu Glu Gly Tyr Val Pro Thr Ser Tyr
Val Glu Val Cys Leu Asp Lys Asn Ala Lys Gly Ala Lys Thr Ile
Son Tyr Thr Ser Tyr
Son

<400> 69

Leu Trp Asn Gly Gly Glu Glu Glu Pro Pro Arg Arg Pro Arg Ala Arg
1 5 10 15

Ser Cys Glu Pro Glu Glu Ala Ala Arg Thr Pro Gly Phe Pro Pro Ser 20 25 30

Arg Gly Ser Arg Gly Ala Lys Gly Ser Pro Gly Arg Gly Thr Arg Glu 35 40 45

Pro Arg Pro Pro Arg Gly Ala Pro Leu Arg Val Pro Cys Thr Met Ser 50 60

Trp Gly Thr Glu Leu Trp Asp Gln Phe Asp Asn Leu Glu Lys His Thr 65 70 75 80

Gln Trp Gly Ile Asp Ile Leu Glu Lys Tyr Ile Lys Phe Val Lys Glu 85 90 95

Arg Thr Glu Ile Glu Leu Ser Tyr Ala Lys Gln Leu Arg Asn Leu Ser 100 105 110

Lys Lys Tyr Gln Pro Lys Lys Asn Ser Lys Glu Glu Glu Glu Tyr Lys 115 120 125

Tyr Thr Ser Cys Lys Ala Phe Ile Ser Asn Leu Asn Glu Met Asn Asp Page 109

<210> 69

<211> 679 <212> PRT

<213> Homo sapiens

135

Tyr Ala Gly Gln His Glu Val Ile Ser Glu Asn Met Ala Ser Gln Ile 145 150 155 160 Ile Val Asp Leu Ala Arg Tyr Val Gln Glu Leu Lys Gln Glu Arg Lys 165 170 175 Ser Asn Phe His Asp Gly Arg Lys Ala Gln Gln His Ile Glu Thr Cys 180 185 190 Trp Lys Gln Leu Glu Ser Ser Lys Arg Arg Phe Glu Arg Asp Cys Lys
195 200 205 Glu Ala Asp Arg Ala Gln Gln Tyr Phe Glu Lys Met Asp Ala Asp Ile 210 215 220 Asn Val Thr Lys Ala Asp Val Glu Lys Ala Arg Gln Gln Ala Gln Ile 225 230 235 240 Arg His Gln Met Ala Glu Asp Ser Lys Ala Asp Tyr Ser Ser Ile Leu 245 250 255 Gln Lys Phe Asn His Glu Gln His Glu Tyr Tyr His Thr His Ile Pro 260 265 270 Asn Ile Phe Gln Lys Ile Gln Glu Met Glu Glu Arg Arg Ile Val Arg 275 280 285 Met Gly Glu Ser Met Lys Thr Tyr Ala Glu Val Asp Arg Gln Val Ile 290 295 300 Pro Ile Ile Gly Lys Cys Leu Asp Gly Ile Val Lys Ala Ala Glu Ser 315 320 Ile Asp Gln Lys Asn Asp Ser Gln Leu Val Ile Glu Ala Tyr Lys Ser 325 330 335 Gly Phe Glu Pro Pro Gly Asp Ile Glu Phe Glu Asp Tyr Thr Gln Pro 340 350 Met Lys Arg Thr Val Ser Asp Asn Ser Leu Ser Asn Ser Arg Gly Glu 355 Lys Pro Asp Leu Lys Phe Gly Gly Lys Ser Lys Gly Lys Leu Trp 370 375 380 Pro Phe Ile Lys Lys Asn Lys Leu Met Ser Leu Leu Thr Ser Pro His 385 390 395 400 Gln Pro Pro Pro Pro Pro Ala Ser Ala Ser Pro Ser Ala Val Pro 405 410 415 Asn Gly Pro Gln Ser Pro Lys Gln Gln Lys Glu Pro Leu Ser His Arg 420 425 430 Phe Asn Glu Phe Met Thr Ser Lys Pro Lys Ile His Cys Phe Arg Ser 435 440 445 Leu Lys Arg Gly Leu Ser Leu Lys Leu Gly Ala Thr Pro Glu Asp Phe 450 460 Ser Asn Leu Pro Pro Glu Gln Arg Arg Lys Lys Leu Gln Gln Lys Val

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480

465 470 Asp Glu Leu Asn Lys Glu Ile Gln Lys Glu Met Asp Gln Arg Asp Ala 485 490 495 Ile Thr Lys Met Lys Asp Val Tyr Leu Lys Asn Pro Gln Met Gly Asp 500 505 510Pro Ala Ser Leu Asp His Lys Leu Ala Glu Val Ser Gln Asn Ile Glu 515 520 525 Leu Arg Val Glu Thr Gln Lys Phe Glu Ala Trp Leu Ala Glu Val 530 540 Glu Gly Arg Leu Pro Ala Arg Ser Glu Gln Ala Arg Arg Gln Ser Gly 545 550 560 Leu Tyr Asp Ser Gln Asn Pro Pro Thr Val Asn Asn Cys Ala Gln Asp 565 570 575 Arg Glu Ser Pro Asp Gly Ser Tyr Thr Glu Glu Gln Ser Gln Glu Ser 580 585 590 Glu Met Lys Val Leu Ala Thr Asp Phe Asp Asp Glu Phe Asp Asp Glu 595 605 Glu Pro Leu Pro Ala Ile Gly Thr Cys Lys Ala Leu Tyr Thr Phe Glu 610 620 Gly Gln Asn Glu Gly Thr Ile Ser Val Val Glu Gly Glu Thr Leu Tyr 625 630 635 640 Val Ile Glu Glu Asp Lys Gly Asp Gly Trp Thr Arg Ile Arg Asn 645 650 655 Glu Asp Glu Glu Gly Tyr Val Pro Thr Ser Tyr Val Glu Val Cys Leu 660 665 670

Asp Lys Asp Ala Lys Asp Ser

<210> 70

<211> 674

<212> PRT

<213> Homo sapiens

<400> 70

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Glu Ala Ala Arg Thr Pro Gly Phe Pro Pro Ser Arg Gly Ser Arg Gly 20 25 30

Ala Lys Gly Ser Pro Gly Arg Gly Thr Arg Glu Pro Arg Pro Pro Arg 35 40 45

Gly Ala Pro Leu Arg Val Pro Cys Thr Met Ser Trp Gly Thr Glu Leu 50 60

Trp Asp Gln Phe Asp Asn Leu Glu Lys His Thr Gln Trp Gly Ile Asp 65 70 75 80

Cura 468 SEQ list 0705
Ile Leu Glu Lys Tyr Ile Lys Phe Val Lys Glu Arg Thr Glu Ile Glu
85 90 95 Leu Ser Tyr Ala Lys Gln Leu Arg Asn Leu Ser Lys Lys Tyr Gln Pro 100 105 110 Lys Asn Ser Lys Glu Glu Glu Glu Tyr Lys Tyr Thr Ser Cys Lys 115 120 125 Ala Phe Ile Ser Asn Leu Asn Glu Met Asn Asp Tyr Ala Gly Gln His 130 135 140 Glu Val Ile Ser Glu Asn Met Ala Ser Gln Ile Ile Val Asp Leu Ala 145 150 155 160 Arg Tyr Val Gln Glu Leu Lys Gln Glu Arg Lys Ser Asn Phe His Asp 165 170 175 Gly Arg Lys Ala Gln Gln His Ile Glu Thr Cys Trp Lys Gln Leu Glu 180 185 190 Ser Ser Lys Arg Arg Phe Glu Arg Asp Cys Lys Glu Ala Asp Arg Ala 195 200 205 Gln Gln Tyr Phe Glu Lys Met Asp Ala Asp Ile Asn Val Thr Lys Ala 210 215 220Asp Val Glu Lys Ala Arg Gln Gln Ala Gln Ile Arg His Gln Met Ala 225 230 235 240 Glu Asp Ser Lys Ala Asp Tyr Ser Ser Ile Leu Gln Lys Phe Asn His 245 250 255 Glu Gln His Glu Tyr Tyr His Thr His Ile Pro Asn Ile Phe Gln Lys 260 265 270 Ile Gln Glu Met Glu Glu Arg Arg Ile Val Arg Met Gly Glu Ser Met 275 280 285 Thr Tyr Ala Glu Val Asp Arg Gln Val Ile Pro Ile Ile Gly Lys 290 295 300 Cys Leu Asp Gly Ile Val Lys Ala Ala Glu Ser Ile Asp Gln Lys Asn 305 310 315 320 Asp Ser Gln Leu Val Ile Glu Ala Tyr Lys Ser Gly Phe Glu Pro Pro 325 330 335 Gly Asp Ile Glu Phe Glu Asp Tyr Thr Gln Pro Met Lys Arg Thr Val 340 345 350 Ser Asp Asn Ser Leu Ser Asn Ser Arg Gly Glu Gly Lys Pro Asp Leu 355 360 365 Lys Phe Gly Gly Lys Ser Lys Gly Lys Leu Trp Pro Phe Ile Lys Lys 370 375 380 Asn Lys Leu Met Ser Leu Leu Thr Ser Pro His Gln Pro Pro Pro 385 390 395 400 Pro Pro Ala Ser Ala Ser Pro Ser Ala Val Pro Asn Gly Pro Gln Ser 405 410

Cura 468 SEQ list 0705 Pro Lys Gln Gln Lys Glu Pro Leu Ser His Arg Phe Asn Glu Phe Met Thr Ser Lys Pro Lys Ile His Cys Phe Arg Ser Leu Lys Arg Gly Leu 435 440 445 Ser Leu Lys Leu Gly Ala Thr Pro Glu Asp Phe Ser Asn Leu Pro Pro 450 455 460 Glu Gln Arg Arg Lys Lys Leu Gln Gln Lys Val Asp Glu Leu Asn Lys 465 470 475 480 Glu Ile Gln Lys Glu Met Asp Gln Arg Asp Ala Ile Thr Lys Met Lys 485 490 495 Asp Val Tyr Leu Lys Asn Pro Gln Met Gly Asp Pro Ala Ser Leu Asp 500 505 510 His Lys Leu Ala Glu Val Ser Gln Asn Ile Glu Lys Leu Arg Val Glu 515 520 525 Thr Gln Lys Phe Glu Ala Trp Leu Ala Glu Val Glu Gly Arg Leu Pro 530 540 Ala Arg Ser Glu Gln Ala Arg Arg Gln Ser Gly Leu Tyr Asp Ser Gln 545 550 560 Asn Pro Pro Thr Val Asn Asn Cys Ala Gln Asp Arg Glu Ser Pro Asp 565 570 575 Gly Ser Tyr Thr Glu Glu Gln Ser Glu Ser Glu Met Lys Val Leu 580 585 590 Ala Thr Asp Phe Asp Asp Glu Phe Asp Asp Glu Glu Pro Leu Pro Ala 595 600 605 Ile Gly Thr Cys Lys Ala Leu Tyr Thr Phe Glu Gly Gln Asn Glu Gly 610 620 Thr Ile Ser Val Val Glu Gly Glu Thr Leu Tyr Val Ile Glu Glu Asp 625 630 635 640 Lys Gly Asp Gly Trp Thr Arg Ile Arg Arg Asn Glu Asp Glu Glu Gly 645 650 655 Tyr Val Pro Thr Ser Tyr Val Glu Val Cys Leu Asp Lys Asn Ala Lys 660 665 670

<210> 71 <211> 457 <212> PRT

Asp Ser

<213> Homo sapiens

<400> 71

Met Ser Leu Met Leu Asp Asp Gln Pro Pro Met Glu Ala Gln Tyr Ala 1 5 10 15

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Gln His Pro Ile Ser Gln Ala Val Cys Trp Arg Ser Met Arg Arg Gly 35 40 45 Cys Ala Val Leu Gly Ala Leu Gly Leu Leu Ala Gly Ala Gly Val Gly 50 60 Ser Trp Leu Leu Val Leu Tyr Leu Cys Pro Ala Ala Ser Gln Pro Ile 65 70 75 80 Ser Gly Thr Leu Gln Asp Glu Glu Ile Thr Leu Ser Cys Ser Glu Ala 85 90 95 Ser Ala Glu Glu Ala Leu Leu Pro Ala Leu Pro Lys Thr Val Ser Phe 100 105 110 Arg Ile Asn Ser Glu Asp Phe Leu Leu Glu Ala Gln Val Arg Asp Gln 115 120 125 Pro Arg Trp Leu Leu Val Cys His Glu Gly Trp Ser Pro Ala Leu Gly 130 135 140 Leu Gln Ile Cys Trp Ser Leu Gly His Leu Arg Leu Thr His His Lys 145 150 155 160 Gly Val Asn Leu Thr Asp Ile Lys Leu Asn Ser Ser Gln Glu Phe Ala 165 170 175 Gln Leu Ser Pro Arg Leu Gly Gly Phe Leu Glu Glu Ala Trp Gln Pro 180 185 190 Arg Asn Asn Cys Thr Ser Gly Gln Val Val Ser Leu Arg Cys Ser Glu 195 200 205 Cys Gly Ala Arg Pro Leu Ala Ser Arg Ile Val Gly Gly Gln Ser Val 210 215 220 Ala Pro Gly Arg Trp Pro Trp Gln Ala Ser Val Ala Leu Gly Phe Arg 225 230 235 240 His Thr Cys Gly Gly Ser Val Leu Ala Pro Arg Trp Val Val Thr Ala 245 250 255 Ala His Cys Met His Ser Phe Arg Leu Ala Arg Leu Ser Ser Trp Arg 260 265 270 Val His Ala Gly Leu Val Ser His Ser Ala Val Arg Pro His Gln Gly 275 280 285 Ala Leu Val Glu Arg Ile Ile Pro His Pro Leu Tyr Ser Ala Gln Asn 290 295 300 His Asp Tyr Asp Val Ala Leu Leu Arg Leu Gln Thr Ala Leu Asn Phe 305 310 315 320 Ser Asp Thr Val Gly Ala Val Cys Leu Pro Ala Lys Glu Gln His Phe 325 330 335 Pro Lys Gly Ser Arg Cys Trp Val Ser Gly Trp Gly His Thr His Pro 340 345 350 Ser His Thr Tyr Ser Ser Asp Met Leu Gln Asp Thr Val Val Pro Leu 360 365

Phe Ser Thr Gln Leu Cys Asn Ser Ser Cys Val Tyr Ser Gly Ala Leu Tyr 370 Pro Arg Met Leu Cys Ala Gly Tyr Leu Asp Gly Arg Ala Asp Ala 400 Cys Gln Gly Asp Ser Gly Gly Gly Pro Leu Val Cys Pro Asp Gly Asp Thr Ala Gln Val Ser Trp Gly Arg Ala Cys Ala Glu Pro Asp His Asp Thr Ala Gln Asp Ser Leu Leu Asp Thr Ala Gln Asp Ser Leu Leu Asp Thr Ala Cys Asp Trp Ile

<210> 72 <211> 455

<212> PRT

<213> Mus musculus

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Cys Gly Ala Arg Pro Leu Ala Ser Arg Ile Val Gly Gln Ala Val
210 220
Ala Ser Gly Arg Trp Pro Trp Gln Ala Ser Val Met Leu Gly Ser Arg
225 230 235 240
His Thr Cys Gly Ala Ser Val Leu Ala Pro His Trp Val Val Thr Ala
245 250 255
Ala His Cys Met Tyr Ser Phe Arg Leu Ser Arg Leu Ser Ser Trp Arg 260 265 270
Val His Ala Gly Leu Val Ser His Gly Ala Val Arg Gln His Gln Gly 275 280 285
Thr Met Val Glu Lys Ile Ile Pro His Pro Leu Tyr Ser Ala Gln Asn
290 295 300
His Asp Tyr Asp Val Ala Leu Leu Gln Leu Arg Thr Pro Ile Asn Phe 305 310 315 320
Ser Asp Thr Val Asp Ala Val Cys Leu Pro Ala Lys Glu Gln Tyr Phe 325 330 335
Pro Trp Gly Ser Gln Cys Trp Val Ser Gly Trp Gly His Thr Asp Pro 340 350
Ser His Thr His Ser Ser Asp Thr Leu Gln Asp Thr Met Val Pro Leu 355 360 365
Leu Ser Thr His Leu Cys Asn Ser Ser Cys Met Tyr Ser Gly Ala Leu 370 375 380
Thr His Arg Met Leu Cys Ala Gly Tyr Leu Asp Gly Arg Ala Asp Ala 385 390 395 400
Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Pro Ser Gly Asp Thr
405 410 415
Trp His Leu Val Gly Val Val Ser Trp Gly Arg Gly Cys Ala Glu Pro 420 425 430
Asn Arg Pro Gly Val Tyr Ala Lys Val Ala Glu Phe Leu Asp Trp Ile
435 440 445
His Asp Thr Val Gln Val Arg
450 455
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<210> 73

<400> 73

Met Glu Ile Arg Cys Thr Glu Glu Gly Ala Gly Pro Gly Ile Phe Arg
1 5 10 15

Met Glu Leu Gly Asp Gln Arg Gln Ser Ile Ser Gln Ser Gln Arg Trp $20 \hspace{1cm} 25 \hspace{1cm} 30$

<211> 445

<212> PRT

<213> Mus musculus

Cura 468 SEQ list 0705
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35 Ala Gly Ala Gly Ile Ala Ser Trp Leu Leu Val Leu Tyr Leu Trp Pro
50 55 60 Ala Ala Ser Pro Ser Ile Ser Gly Thr Leu Gln Glu Glu Met Thr 65 70 75 80 Leu Asn Cys Pro Gly Val Ser Cys Glu Glu Glu Leu Leu Pro Ser Leu 85 90 95 Pro Lys Thr Val Ser Phe Arg Ile Asn Gly Glu Asp Leu Leu Gln
100 105 110 Val Gln Val Arg Ala Arg Pro Asp Trp Leu Leu Val Cys His Glu Gly 115 120 125 Trp Ser Pro Ala Leu Gly Met His Ile Cys Lys Ser Leu Gly His Ile 130 135 140 Arg Leu Thr Gln His Lys Ala Val Asn Leu Ser Asp Ile Lys Leu Asn 145 150 155 160 Arg Ser Gln Glu Phe Ala Gln Leu Ser Ala Arg Pro Gly Gly Leu Val 165 170 175 Glu Glu Ala Trp Lys Pro Ser Ala Asn Cys Pro Ser Gly Arg Ile Val 180 185 190 Ser Leu Lys Cys Ser Glu Cys Gly Ala Arg Pro Leu Ala Ser Arg Ile 195 200 205 Val Gly Gln Ala Val Ala Ser Gly Arg Trp Pro Trp Gln Ala Ser 210 215 220 Val Met Leu Gly Ser Arg His Thr Cys Gly Ala Ser Val Leu Ala Pro 225 230 235 240 His Trp Val Val Thr Ala Ala His Cys Met Tyr Ser Phe Arg Leu Ser 245 250 255 Arg Leu Ser Ser Trp Arg Val His Ala Gly Leu Val Ser His Gly Ala 260 265 270 Val Arg Gln His Gln Gly Thr Met Val Glu Lys Ile Ile Pro His Pro 275 280 285 Leu Tyr Ser Ala Gln Asn His Asp Tyr Asp Val Ala Leu Leu Gln Leu 290 295 300 Arg Thr Pro Ile Asn Phe Ser Asp Thr Val Gly Ala Val Cys Leu Pro 305 310 315 320 Ala Lys Glu Gln Tyr Phe Pro Trp Gly Ser Gln Cys Trp Val Ser Gly 325 330 335 Trp Gly His Thr Asp Pro Ser His Thr His Ser Ser Asp Thr Leu Gln 340 350 Asp Thr Met Val Pro Leu Leu Ser Thr His Leu Cys Asn Ser Ser Cys 355 360 365

Met Tyr Ser Gly Ala Leu Thr His Cura 468 SEQ list 0705 Ala Gly Tyr Leu 370 Gly Arg Ala Asp Ala Cys Gln Gly Asp Ser Gly Gly Pro Leu Val 400 Cys Pro Ser Gly Asp Thr Trp His Leu Val Gly Val Val Ser Trp Gly Arg Gly Pro Asn Arg Pro Gly Val Tyr Ala Lys Val Ala Glu Phe Leu Asp Trp Ile His Asp Thr Val Gln Val Arg 445

<210> 74 <211> 398 <212> PRT <213> Homo sapiens

<400> 74 Met Ser Leu Met Leu Asp Asp Gln Pro Pro Met Glu Ala Gln Tyr Ala 1 5 10 15 Glu Glu Gly Pro Gly Pro Gly Ile Phe Arg Ala Glu Pro Gly Asp Gln 20 . 25 30 Gln His Pro Ile Ser Gln Ala Val Cys Trp Arg Ser Met Arg Arg Gly
35 40 45 Cys Ala Val Leu Gly Ala Leu Gly Leu Leu Ala Gly Ala Gly Val Gly 50 60 Ser Trp Leu Leu Val Leu Tyr Leu Cys Pro Ala Ala Ser Gln Pro Ile 65 70 75 80 Ser Gly Thr Leu Gln Asp Glu Glu Ile Thr Leu Ser Cys Ser Glu Ala 85 90 95 Ser Ala Glu Glu Ala Leu Leu Pro Ala Leu Pro Lys Thr Val Ser Phe $100 \hspace{1cm} 105 \hspace{1cm} 110$ Arg Ile Asn Ser Glu Asp Phe Leu Leu Glu Ala Gln Val Arg Asp Gln 115 120 125 Pro Arg Trp Leu Leu Val Cys His Glu Gly Trp Ser Pro Ala Leu Gly 130 135 140 Leu Gln Ile Cys Trp Ser Leu Gly His Leu Arg Leu Thr His His Lys 145 150 160 Gly Val Asn Leu Thr Asp Ile Lys Leu Asn Ser Ser Gln Glu Phe Ala 165 170 175 Gln Leu Ser Pro Arg Leu Gly Gly Phe Leu Glu Glu Ala Trp Gln Pro 185 190 Arg Asn Asn Cys Thr Ser Gly Gln Val Ser Leu Arg Cys Ser Glu
195 200 205 Cys Gly Ala Arg Pro Leu Ala Ser Arg Ile Val Gly Gln Ser Val 210 215 220

 Ala Pro Gly Arg
 Trp Pro Gly Arg
 Trp Pro Gln
 Ala Ser Val Ala
 Ala Leu Gly Phe Arg 240

 His Thr Cys
 Gly Gly Ser Val Leu Ala Pro 250
 Arg Trp Val Val Thr Ala
 Ala His Cys Met His Ser Phe Arg Leu 265
 Ala Arg Leu Ser Ser Trp Arg 270
 Trp Arg 270

 Val His Ala Gly Leu Val Ser His 275
 Ser His Pro Leu 370
 Arg Pro His Gln Arg 19
 Arg Pro His Gln Arg 19
 Arg Pro His Gln Arg 19
 Arg Pro His Ala Cys Leu Arg 19
 Arg Pro His Ala Leu Arg 19
 Arg Pro His Arg

<210> 75

<211> 311

<212> PRT

<213> Mus musculus

<400> 75

Met His Ile Cys Lys Ser Leu Gly His Ile Arg Leu Thr Gln His Lys
1 10 15

Ala Val Asn Leu Ser Asp Ile Lys Leu Asn Arg Ser Gln Glu Phe Ala 20 25 30

Gln Leu Ser Ala Arg Pro Gly Gly Leu Val Glu Glu Ala Trp Lys Pro 35 40 45

Ser Ala Asn Cys Pro Ser Gly Arg Ile Val Ser Leu Lys Cys Ser Glu 50 60

Cys Gly Ala Arg Pro Leu Ala Ser Arg Ile Val Gly Gly Gln Ala Val 65 70 75 80

Ala Ser Gly Arg Trp Pro Trp Gln Ala Ser Val Met Leu Gly Ser Arg 85 90 95

His Thr Cys Gly Ala Ser Val Leu Ala Pro His Trp Val Val Thr Ala 100 105 110

Ala His Cys Met Tyr Ser Phe Arg Leu Ser Arg Leu Ser Ser Trp Arg Page 119
 Val
 His Ala Gly Leu Val
 Ser His Gly Ala Val
 Ara Gly Ala Val
 Arg Gln His Gln Gly

 Thr Met Val Glu Lys Ile 150
 Ile Pro His Pro Leu 155
 Tyr Ser Ala Gln Asn 160

 His Asp Tyr Asp Val 165
 Ala Leu Leu Gln Leu Arg Thr Pro Ile Asn Phe 175

 Ser Asp Thr Val Asp Asp Ala Val Cys Leu Pro Ala Lys Glu Glu Glu Tyr Phe 195

 Pro Trp Gly Ser Gln Cys Trp Val Ser Gly Trp Gly His Thr Asp Pro 205

 Ser His Thr His Ser Ser Asp Thr Leu Gln Asp Thr Met Val Pro Leu 210

 Leu Ser Thr His Leu Cys Asn Ser Ser Cys Mat Tyr Ser Gly Ala Leu 240

 Thr His Arg Met Leu Cys Ala Gly Tyr Leu Asp Gly Arg Ala Asp Ala Asp Ala 255

 Cys Gln Gly Asp Ser Gly Val Val Val Ser Trp Gly Arg Gly Cys Ala Glu Pro 260

 Ash Arg Pro Gly Val Tyr Ala Lys Val Ala Glu Phe Leu Asp Trp Ile His Asp Thr Val Gln Val 310

<210> 76

<211> 199

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Reprolysin family zinc protease Consensus Sequence

<400× 76

Lys Tyr Ile Glu Leu Phe Ile Val Val Asp His Gly Met Phe Thr Lys

1 10 15

Tyr Gly Ser Asp Leu Asn Lys Ile Arg Gln Arg Val His Gln Ile Val 20 25 30

Asn Leu Val Asn Glu Ile Tyr Arg Pro Leu Asn Ile Arg Val Val Leu 35 40 45

Val Gly Leu Glu Ile Trp Ser Asp Gly Asp Lys Ile Thr Val Gln Gly 50 60

Asp Ala Asn Asp Thr Leu His Arg Phe Leu Glu Trp Arg Glu Thr Asp 65 70 75 80

Leu Leu Lys Arg Lys Ser His Asp Asn Ala Gln Leu Leu Thr Gly Ile 85 90 95 Asp Phe Asp Gly Asn Thr Ile Gly Ala Ala Tyr Val Gly Gly Met Cys $100 \hspace{1cm} 105 \hspace{1cm} 110$ Ser Pro Lys Arg Ser Val Gly Val Val Gln Asp His Ser Pro Ile Val 115 120 125 Leu Leu Val Ala Val Thr Met Ala His Glu Leu Gly His Asn Leu Gly 130 135 140 Met Thr His Asp Asp Ile Asn Lys Cys Thr Cys Glu Gly Gly Gly 145 150 155 160 Cys Ile Met Asn Pro Val Ala Ser Ser Ser Pro Gly Lys Lys Phe Ser 165 170 175 Asn Cys Ser Met Asp Asp Tyr Gln Gln Phe Leu Thr Lys Gly Lys Pro 180 185 190 Gln Cys Leu Leu Asn Lys Pro 195 <210> 77 <211> 51 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Thrombospondin type 1 Consensus Sequence <400> 77 Trp Gly Glu Trp Ser Glu Trp Ser Pro Cys Ser Val Thr Cys Gly Gly
1 5 10 15 Gly Val Gln Thr Arg Thr Arg Cys Cys Asn Pro Pro Pro Asn Gly Gly 20 25 30 Gly Pro Cys Thr Gly Pro Asp Thr Glu Thr Arg Ala Cys Asn Glu Gln 35 40 <210> 78 <211> 48 <212> PRT <213> Artificial Sequence <220> <223> Description of Artificial Sequence: Thrombospondin type 1 domain Consenus Sequence <400> 78 Ser Pro Trp Ser Glu Trp Ser Pro Cys Ser Val Thr Cys Gly Lys Gly 1 5 10 15

Ile Arg Thr Arg Gln Arg Thr Cys Asn Ser Pro Ala Gly Gly Lys Pro

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Cys Thr Gly Asp Ala Gln Glu Thr Glu Ala Cys Met Met Asp Pro Cys 40 45

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<210> 79
<211> 117
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Reprolysin
       family propeptide Consensus Sequence
His Leu Glu Lys Asn Arg Ser Leu Leu Ala Pro Asp Phe Thr Val Thr
Thr Tyr Asp Asp Gly Thr Leu Val Thr Glu His Pro Leu Ile Gln 20 25 30
Asp His Cys Tyr Tyr Gln Gly Tyr Val Glu Gly Tyr Pro Asn Ser Ala 35 40 45
Val Ser Leu Ser Thr Cys Ser Gly Leu Arg Gly Ile Leu Gln Leu Glu 50 60
Asn Leu Ser Tyr Gly Ile Glu Pro Leu Glu Ser Ser Asp Gly Phe Glu 65 70 75 80
His Ile Ile Tyr Gln Ile Glu His Leu Lys Thr Val Pro Gly Pro Cys
85 90 95
Gly Glu Cys Gly Ser Leu Ser Val Ser Thr Asp Ser Gln Tyr Gly Ile
100 105 110
Arg Ser Pro Ser Pro
        115
<210> 80
<211> 751
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence:
      Alpha-2-macroglobulin family Consensus Sequence
<400> 80
Ile Asp Glu Asp Asp Ile Thr Ile Arg Ser Tyr Phe Pro Glu Ser Trp 1 	 5 	 10 	 15
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Leu Trp Glu Val Glu Val Asp Arg Ser Pro Val Leu Thr Val Asn 20 25 30

Ile Thr Leu Pro Asp Ser Ile Thr Thr Trp Glu Ile Leu Ala Val Ser 35 40

Cura 468 SEQ list 0705 Leu Ser Asn Thr Lys Gly Leu Cys Val Ala Asp Pro Val Glu Leu Thr 50 55 60 Val Phe Gln Asp Phe Phe Leu Glu Leu Arg Leu Pro Tyr Ser Val Val 65 70 75 80 Arg Gly Glu Gln Val Glu Leu Arg Ala Val Leu Tyr Asn Tyr Leu Pro 85 90 95 Ser Gln Asp Ile Lys Val Val Gln Leu Glu Val Glu Pro Leu Cys 100 105 110Gln Ala Gly Phe Cys Ser Leu Ala Thr Gln Arg Thr Arg Ser Ser Gln 115 120 125 Ser Val Arg Pro Lys Ser Leu Ser Ser Val Ser Phe Pro Val Val Val 130 135 140 Pro Leu Ala Ser Gly Leu Ser Leu Val Glu Val Val Ala Ser Val 150 155 160 Pro Glu Phe Phe Val Lys Asp Ala Val Val Lys Thr Leu Lys Val Glu 165 170 175 Pro Glu Gly Ala Arg Lys Glu Glu Thr Val Ser Ser Leu Leu Leu Pro 180 185 190 Pro Glu His Leu Gly Gly Gly Leu Glu Val Ser Glu Val Pro Ala Leu 195 200 205 Lys Leu Pro Asp Asp Val Pro Asp Thr Glu Ala Glu Ala Val Ile Ser 210 215 220 Val Gln Gly Asp Pro Val Ala Gln Ala Ile Gln Asn Thr Leu Ser Gly 235 230 235 Glu Gly Leu Asn Asn Leu Leu Arg Leu Pro Ser Gly Cys Gly Glu Gln 245 250 255 Asn Met Ile Tyr Met Ala Pro Thr Val Tyr Val Leu His Tyr Leu Asp 260 265 270 Glu Thr Trp Gln Trp Glu Lys Pro Gly Thr Lys Lys Lys Gln Lys Ala 275 280 285 Ile Asp Leu Ile Asn Lys Gly Tyr Gln Arg Gln Leu Asn Tyr Arg Lys 290 295 300 Ala Asp Gly Ser Tyr Ala Ala Phe Leu His Arg Ala Ser Ser Thr Trp 305 310 315 320 Leu Thr Ala Phe Val Leu Lys Val Phe Ser Gln Ala Arg Asn Tyr Val 325 330 335 Phe Ile Asp Glu Glu His Ile Cys Gly Ala Val Lys Trp Leu Ile Leu 340 345 350 Asn Gln Gln Lys Asp Asp Gly Val Phe Arg Glu Ser Gly Pro Val Ile 355 360 365 His Asn Glu Met Lys Gly Gly Val Gly Asp Asp Ala Glu Val Glu Val 370 380

Cura 468 SEQ list 0705 Thr Leu Thr Ala Phe Ile Thr Ile Ala Leu Leu Glu Ala Lys Leu Val 385 390 395 400 Cys Ile Ser Pro Val Val Ala Asn Ala Leu Ser Ile Leu Lys Ala Ser 410 415 Asp Tyr Leu Leu Glu Asn Tyr Ala Asn Gly Gln Arg Val Tyr Thr Leu 420 425 430 Ala Leu Thr Ala Tyr Ala Leu Ala Leu Ala Gly Val Leu His Lys Leu 435 440 445 Lys Glu Ile Leu Lys Ser Leu Lys Glu Glu Leu Tyr Lys Ala Leu Val 450 455 460 Lys Gly His Trp Glu Arg Pro Gln Lys Pro Lys Asp Ala Pro Gly His 475 480 Pro Tyr Ser Pro Gln Pro Gln Ala Ala Ala Val Glu Met Thr Ser Tyr 485 490 495 Ala Leu Leu Ala Leu Leu Thr Leu Leu Pro Phe Pro Lys Val Glu Met 500 505 510 Ala Pro Lys Val Val Lys Trp Leu Thr Glu Gln Gln Tyr Tyr Gly Gly 515 520 525 Gly Phe Gly Ser Thr Gln Asp Thr Val Met Ala Leu Gln Ala Leu Ser 530 535 540 Lys Tyr Gly Ile Ala Thr Pro Thr His Lys Glu Lys Asn Leu Ser Val 545 550 555 560 Thr Ile Gln Ser Pro Ser Gly Ser Phe Lys Ser His Phe Gln Ile Leu 565 570 575 Asn Asn Asn Ala Phe Leu Leu Arg Pro Val Glu Leu Pro Leu Asn Glu 580 590 Gly Phe Thr Val Thr Ala Lys Val Thr Gly Gln Gly Thr Leu Thr Leu 595 600 605 Val Thr Thr Tyr Arg Tyr Lys Val Leu Asp Lys Lys Asn Thr Phe Cys 610 615 620 Phe Asp Leu Lys Ile Glu Thr Val Pro Asp Thr Cys Val Glu Pro Lys 625 630 635 640 Gly Ala Lys Asn Ser Asp Tyr Leu Ser Ile Cys Thr Arg Tyr Ala Gly 645 650 655 Ser Arg Ser Asp Ser Gly Met Ala Ile Ala Asp Ile Ser Met Leu Thr 660 665 670Gly Phe Ile Pro Leu Lys Pro Asp Leu Lys Lys Leu Glu Asn Gly Val 675 680 685 Asp Arg Tyr Val Ser Lys Tyr Glu Ile Asp Gly Asn His Val Leu Leu 690 695 700 Tyr Leu Asp Lys Val Ser His Ser Glu Thr Glu Cys Val Gly Phe Lys 705 710 715 720

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Ile His Gln Asp Phe Glu Val Gly Leu Leu Gln Pro Ala Ser Val Lys
725

Val Tyr Asp Tyr Tyr Glu Pro Asp Glu Gln Cys Thr Ala Phe Tyr
740

745

750

<210> 81 <211> 620 <212> PRT <213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:
 Alpha-2-macroglobulin family N-terminal region
 Consensus Sequence

<400> 81 Arg Leu Leu Trp Leu Leu Leu Leu Leu Leu Leu Phe Phe Asp Ser Ser 1 5 10 15 Leu Gln Lys Pro Arg Tyr Met Val Ile Val Pro Ser Ile Leu Arg Thr 20 25 30 Glu Thr Pro Glu Lys Val Cys Val Gln Leu His Asp Leu Asn Glu Thr 35 40 45 Val Thr Val Thr Val Ser Leu His Ser Phe Pro Gly Lys Arg Asn Leu 50 60 Ser Ser Leu Phe Thr Val Leu Leu Ser Ser Lys Asp Leu Phe His Cys 65 70 75 80 Val Ser Phe Thr Val Pro Gln Pro Gly Leu Phe Lys Ser Ser Lys Gly 85 90 95 Glu Glu Ser Phe Val Val Gln Val Lys Gly Pro Thr His Thr Phe 100 105 110 Lys Glu Lys Val Thr Val Leu Val Ser Ser Arg Arg Gly Leu Val Phe 115 120 125 Ile Gln Thr Asp Lys Pro Ile Tyr Thr Pro Gly Gln Thr Val Arg Tyr 130 135 140 Arg Val Phe Ser Val Asp Glu Asn Leu Arg Pro Leu Asn Glu Leu Ile 145 150 155 160 Leu Val Tyr Ile Glu Asp Pro Glu Gly Asn Arg Val Asp Gln Trp Glu 165 170 175 Val Asn Lys Leu Glu Gly Gly Ile Phe Gln Leu Ser Phe Pro Ile Pro 180 185 190 Ser Glu Pro Ile Gln Gly Thr Trp Lys Ile Val Ala Arg Tyr Glu Ser 195 200 205 Gly Pro Glu Ser Asn Tyr Thr His Tyr Phe Glu Val Lys Glu Tyr Val 210 215 220 Leu Pro Ser Phe Glu Val Ser Ile Thr Pro Pro Lys Pro Phe Ile Tyr 225 230 235 240

Cura 468 SEQ list 0705
Tyr Asp Asn Phe Lys Glu Phe Glu Val Thr Ile Cys Ala Arg Tyr Thr
245 250 255 Tyr Gly Lys Pro Val Pro Gly Val Ala Tyr Val Arg Phe Gly Val Lys 260 265 270 Asp Glu Asp Gly Lys Lys Glu Leu Leu Ala Gly Leu Glu Glu Arg Ala 275 280 285 Lys Leu Leu Asp Gly Asn Gly Glu Ile Cys Leu Ser Gln Glu Val Leu 290 295 300 Leu Lys Glu Leu Gln Leu Lys Asn Glu Asp Leu Glu Gly Lys Ser Leu 305 310 315 320 Tyr Val Ala Val Ala Val Ile Glu Ser Glu Gly Gly Asp Met Glu Glu 325 330 335 Ala Glu Leu Gly Gly Ile Lys Ile Val Arg Ser Pro Tyr Lys Leu Lys $340 \hspace{1cm} 345 \hspace{1cm} 350$ Phe Val Lys Thr Pro Ser His Phe Lys Pro Gly Ile Pro Phe Phe Leu 355 360 365Lys Val Leu Val Val Asp Pro Asp Gly Ser Pro Ala Pro Asn Val Pro 370 375 380 Val Lys Val Ser Ala Gln Asp Ala Ser Tyr Tyr Ser Asn Gly Thr Thr 385 390 395 400 Asp Glu Asp Gly Leu Ala Gln Phe Ser Ile Asn Thr Ser Gly Ile Ser 405 410 415 Ser Leu Ser Ile Thr Val Arg Thr Asn His Lys Glu Leu Pro Glu Glu 420 425 430 Val Gln Ala His Ala Glu Ala Gln Ala Thr Ala Tyr Ser Thr Val Ser 435 440 445 Leu Ser Lys Ser Tyr Ile His Leu Ser Ile Glu Arg Thr Leu Pro Cys 450 455 460 Gly Pro Gly Val Gly Glu Gln Ala Asn Phe Ile Leu Arg Gly Lys Ser 465 470 475 480 Leu Gly Glu Leu Lys Ile Leu His Phe Tyr Tyr Leu Ile Met Ser Lys 485 490 495 Gly Lys Ile Val Lys Thr Gly Arg Glu Pro Arg Glu Pro Gly Gln Gly 500 510 Leu Phe Ser Leu Ser Ile Pro Val Thr Pro Asp Leu Ala Pro Ser Phe 515 520 525 Arg Leu Val Ala Tyr Tyr Ile Leu Pro Gln Gly Glu Val Val Ala Asp 530 540 Ser Val Trp Ile Asp Val Glu Asp Cys Cys Ala Asn Lys Leu Asp Leu 545 550 555 560 Ser Phe Ser Pro Ser Lys Asp Tyr Arg Leu Pro Ala Gln Gln Val Lys 565 570 575

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Cura 468 SEQ list 0705
Leu Arg Val Glu Ala Asp Pro Gln Ser Leu Val Ala Leu Arg Ala Val
Asp Gln Ala Val Tyr Leu Leu Lys Pro Lys Ala Lys Leu Ser Met Ser
                              600
                                                    605
Lys Val Tyr Asp Leu Leu Glu Lys Ser Asp Leu Gly
610 615 620
<210> 82
<211> 186
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Sodium Bile
      acid symporter family consensus sequence
Ala Leu Gly Leu Phe Leu Met Met Phe Ser Met Gly Leu Lys Val Arg
1 15
Phe Glu Asp Leu Lys Glu Ala Leu Arg Arg Pro Lys Ala Leu Ile Leu 20 25 30
Gly Leu Leu Leu Gln Trp Ile Ile Met Pro Leu Leu Met Phe Ile Leu
Ala Trp Leu Leu Arg Leu Pro Pro Glu Leu Ala Thr Gly Leu Ile
50 60
Leu Val Gly Cys Ala Pro Gly Gly Ala Met Ser Asn Val Trp Thr Tyr
65 70 75 80
Leu Ala Lys Gly Asp Val Glu Leu Ser Val Val Met Val Ala Leu Ser
85 90 95
Thr Leu Leu Ala Pro Leu Val Thr Pro Leu Leu Ser Phe Leu Leu Ala
Gly Leu Leu Val His Val Asp Ala Val Ser Pro Trp Ser Leu Ile Lys
115 120 125
Ser Val Leu Val Tyr Val Ile Ile Pro Leu Ile Ala Gly Met Leu Thr
Arg Tyr Phe Leu Pro Glu Trp Phe Glu Gln Arg Val Leu Pro Val Leu
145 150 155 160
Ser Pro Ile Ser Leu Ile Gly Leu Leu Leu Thr Ile Val Val Ile Phe
Ala Leu Asn Gly Glu Val Ile Ala Ser Leu
            180
<210> 83
<211> 191
<212> PRT
<213> Artificial Sequence
<220>
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<223> Description of Artificial Sequence: SPFH domain/Band 7 family Consensus Sequence

Lys Ile Val Lys Glu Tyr Glu Arg Gly Val Ile Phe Arg Leu Gly Arg 20 25 30

Tyr Val Arg Gln Val Val Gly Pro Gly Leu His Phe Ile Ile Pro Phe 35 40 45

Ile Asp Thr Val Lys Lys Val Asp Leu Arg Thr Val Val Tyr Asp Val 50 60

Pro Ser Gln Glu Ile Ile Thr Lys Asp Asn Val Val Ile Val Asp 65 70 75 80

Ala Val Val Tyr Tyr Arg Val Val Asp Pro Leu Lys Ala Val Tyr Glu 85 90 95

Val Glu Asp Ala Glu Arg Ala Leu Pro Gln Leu Ala Gln Thr Thr Leu 100 105 110

Arg Asn Val Ile Gly Gln Phe Thr Leu Asp Glu Ile Leu Thr Glu Arg 115 120 125

Glu Arg Ile Asn Ser Gln Leu Arg Glu Ile Leu Asp Glu Ala Thr Asp 130 135 140

Pro Trp Gly Ile Lys Val Glu Arg Val Glu Ile Lys Asp Ile Arg Leu 145 150 155 160

Pro Glu Glu Val Gln Arg Ala Met Ala Gln Met Glu Ala Glu Arg 165 170 175

Glu Ala Arg Ala Lys Ile Leu Glu Ala Glu Gly Glu Gln Glu Ala 180 185 190

<210> 84

<211> 160

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Prohibitin homologues Consensus Sequence

<400> 84

Ala Ala Phe Tyr Val Ile Gly Glu Gly Glu Arg Gly Val Val Glu Arg 1 5 10 15

Leu Gly Arg Val Leu Lys Val Leu Gly Pro Gly Leu His Phe Val Ile 20 25 30

Pro Phe Ile Asp Asp Val Lys Arg Val Asp Leu Arg Ala Gln Thr Asp 35 40 45

Asp Val Pro Pro Gln Glu Val Ile Thr Lys Asp Asn Val Thr Val Ser 50 60

Val Asp Ala Val Val Tyr Tyr Arg Val Leu Asp Pro Leu Lys Ala Val 80

Tyr Gly Val Leu Asp Ala Asp Tyr Arg Ala Leu Arg Gln Leu Ala Gln 95

Thr Thr Leu Arg Ser Val Ile Gly Lys Arg Thr Leu Asp Glu Leu Leu 110

Thr Asp Glu Arg Glu Lys Ile Ser Glu Asn Ile Arg Glu Glu Leu Asn Glu Asn 130

Glu Ala Ala Glu Pro Trp Gly Ile Glu Val Glu Asp Val Glu Ile Lys Asp Ile Arg Leu Arg Glu Ile Lys Ile Ser Glu Ala Met Glu Ala Gln Gln 160

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<210> 85
<211> 79
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Glu Ser Gly Ala Pro Cys Gln Arg Trp Asp Ser Gln Thr Pro His Arg 20 25 30

His Ser Lys Tyr Thr Pro Glu Arg Tyr Pro Ala Lys Gly Leu Gly Glu 35 40 45

Asn Tyr Cys Arg Asn Pro Asp Gly Asp Glu Arg Pro Trp Cys Tyr Thr 50 55 60

Thr Asp Pro Arg Val Arg Trp Glu Tyr Cys Asp Ile Pro Arg Cys 65 70 75

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Kringle domain Consensus Sequence

<400> 85

Cys Tyr His Gly Asn Gly Glu Asn Tyr Arg Gly Thr Ala Ser Thr Thr
1 5 10 15

<210> 86 <211> 83

<211> 03 <212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Kringle domain Consensus Sequence

<400× 86

Arg Asp Cys Tyr Ala Gly Asn Gly Glu Ser Tyr Arg Gly Thr Ala Ser 10 15

Thr Thr Lys Ser Gly Lys Pro Cys Gln Arg Trp Asp Ser Gln Thr Pro 20 25 30

His Leu His Arg Phe Thr Pro Glu Arg Phe Pro Glu Leu Gly Leu Glu 45

His Asn Tyr Cys Arg Asn Pro Asp Gly Asp Ser Glu Gly Pro Trp Cys 50

Tyr Thr Thr Asp Pro Asn Val Arg Trp Glu Tyr Cys Asp Ile Pro Gln 80

Cys Glu Ser

<210> 87 <211> 230

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Trypsin-like serine protease Consensus Sequence

Gly Glu Glu Thr Gln Thr Val Lys Val Ser Lys Val Ile Val His Pro
65 70 75 80

Asn Tyr Asn Pro Ser Thr Tyr Asp Asn Asp Ile Ala Leu Leu Lys Leu
85 90 95

Ser Glu Pro Val Thr Leu Ser Asp Thr Val Arg Pro Ile Cys Leu Pro $100 \hspace{1cm} 105 \hspace{1cm} 110$

Ser Ser Gly Tyr Asn Val Pro Ala Gly Thr Thr Cys Thr Val Ser Gly 115 120 125

Trp Gly Arg Thr Ser Glu Ser Ser Gly Ser Leu Pro Asp Thr Leu Gln
130 135 140

Glu Val Asn Val Pro Ile Val Ser Asn Ala Thr Cys Arg Arg-Ala Tyr 145 150 155 160

Ser Gly Gly Pro Ala Ile Thr Asp Asn Met Leu Cys Ala Gly Gly Leu 165 170 175

Glu Gly Gly Lys Asp Ala Cys Gln Gly Asp Ser Gly Gly Pro Leu Val 180 185 190

Cys Asn Asp Pro Arg Trp Val Leu Val Gly Ile Val Ser Trp Gly Ser 195 200 205

Cura 468 SEQ list 0705
Tyr Gly Cys Ala Arg Pro Asn Lys Pro Gly Val Tyr Thr Arg Val Ser
210 215 220

Ser Tyr Leu Asp Trp Ile 225 230

<210> 88 <211> 217

<212> PRT <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Trypsin Consensus Sequence

Ser Leu Gln Val Ser Ser Gly His Phe Cys Gly Gly Ser Leu Ile Ser 20 25 30

Glu Asn Trp Val Leu Thr Ala Ala His Cys Val Ser Gly Ala Ser Ser 35 40 45

Val Arg Val Val Leu Gly Glu His Asn Leu Gly Thr Thr Glu Gly Thr 50 55 60

Glu Gln Lys Phe Asp Val Lys Lys Ile Ile Val His Pro Asn Tyr Asn 65 70 75 80

Pro Asp Thr Asn Asp Ile Ala Leu Leu Lys Leu Lys Ser Pro Val Thr 85 90 95

Leu Gly Asp Thr Val Arg Pro Ile Cys Leu Pro Ser Ala Ser Ser Asp 100 105 110

Leu Pro Val Gly Thr Thr Cys Ser Val Ser Gly Trp Gly Arg Thr Lys 115 120 125

Asn Leu Gly Thr Ser Asp Thr Leu Gln Glu Val Val Val Pro Ile Val 130 135 140

Ser Arg Glu Thr Cys Arg Ser Ala Tyr Gly Gly Thr Val Thr Asp Thr 145 150 155 160

Met Ile Cys Ala Gly Ala Leu Gly Gly Lys Asp Ala Cys Gln Gly Asp 165 170 175

Ser Gly Gly Pro Leu Val Cys Ser Asp Gly Glu Leu Val Gly Ile Val 180 185 190

Ser Trp Gly Tyr Gly Cys Ala Val Gly Asn Tyr Pro Gly Val Tyr Thr 195 200 205

Arg Val Ser Arg Tyr Leu Asp Trp Ile 210 215

<210> 89

<211> 79

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Divergent subfamily of APPLE domains Consensus Sequence

<400> 89

Lys Ser Asp Asp Cys Phe Val Arg Leu Pro Asn Thr Lys Leu Pro Asp 1 5 10 15

Phe Ser Pro Ile Val Ile Ser Val Ala Ser Leu Glu Glu Cys Ala Gln 20 25 30

Lys Cys Leu Asn Ser Asn Cys Ser Cys Arg Ser Phe Thr Tyr Asn Asn 35 40 45

Asp Thr Lys Gly Cys Leu Leu Trp Ser Glu Ser Ser Leu Gly Asp Ala 50 55 60

Arg Gln Leu Leu Pro Ser Gly Gly Val Asp Tyr Tyr Glu Lys Ile 65 70 75

<210> 90

<211> 145

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Lipocalin/cytosolic fatty-acid binding protein family Consensus Sequence

<400> 90

Lys Phe Ala Gly Lys Trp Tyr Leu Val Ala Ser Ala Asn Phe Asp Pro
1 5 10 15

Glu Leu Lys Glu Glu Leu Gly Val Leu Glu Ala Thr Arg Lys Glu Ile 20 25 30

Thr Pro Leu Lys Glu Gly Asn Leu Glu Ile Val Phe Asp Gly Asp Lys 35 40 45

Asn Gly Ile Cys Glu Glu Thr Phe Gly Lys Leu Glu Lys Thr Lys Lys 50 60

Leu Gly Val Glu Phe Asp Tyr Tyr Thr Gly Asp Asn Arg Phe Val Val 65 70 75 80

Leu Asp Thr Asp Tyr Asp Asn Tyr Leu Leu Val Cys Val Gln Lys Gly
85 90 95

Asp Gly Asn Glu Thr Ser Arg Thr Ala Glu Leu Tyr Gly Arg Thr Pro
100 105 110

Glu Leu Ser Pro Glu Ala Leu Glu Leu Phe Glu Thr Ala Thr Lys Glu 115 120 125

Leu Gly Ile Pro Glu Asp Asn Val Val Cys Thr Arg Gln Thr Glu Arg 130 135 140

Cys 145

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<210> 91
<211> 218
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Connexin
       Consensus Sequence
<400> 91
Met Asp Trp Ser Phe Leu Gly Arg Leu Leu Glu Gly Val Asn Lys His 1 5 10 15
Ser Thr Ala Ile Gly Lys Ile Trp Leu Ser Val Leu Phe Ile Phe Arg
20 25 30
Ile Leu Val Leu Gly Val Ala Ala Glu Ser Val Trp Gly Asp Glu Gln 35 40 45
Ser Asp Phe Val Cys Asn Thr Gln Gln Pro Gly Cys Glu Asn Val Cys 50 60
Tyr Asp Gln Phe Phe Pro Ile Ser His Val Arg Leu Trp Val Leu Gln 65 70 75 80
Leu Ile Phe Val Ser Thr Pro Ser Leu Leu Tyr Leu Gly His Val Ala
85 90 95
Tyr Arg Val Arg Arg Glu Glu Lys Leu Arg Glu Lys Glu Glu His
100 105 110
Ser Lys Gly Leu Tyr Ser Glu Glu Ala Lys Lys Arg Cys Gly Ser Glu
115 120 125
Asp Gly Lys Val Arg Ile Arg Gly Gly Leu Trp Trp Thr Tyr Val Phe 130 140
Ser Ile Ile Phe Lys Ser Ile Phe Glu Val Gly Phe Leu Tyr Gly Gln
145 150 155 160
Tyr Leu Leu Tyr Gly Phe Thr Met Ser Pro Leu Val Val Cys Ser Arg
165 170 175
Ala Pro Cys Pro His Thr Val Asp Cys Phe Val Ser Arg Pro Thr Glu
180 185 190
Lys Thr Ile Phe Ile Val Phe Met Leu Val Val Ser Ala Ile Cys Leu
195 200 205
Leu Leu Asn Leu Ala Glu Leu Phe Tyr Leu
    210
                           215
<210> 92
<211> 59
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Src homology 3
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domains Consensus Sequence

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<400> 92
Glu Gly Pro Gln Val Arg Ala Leu Tyr Asp Tyr Thr Ala Gln Asp Pro
1 15
Asp Glu Leu Ser Phe Lys Lys Gly Asp Ile Ile Thr Val Leu Glu Lys 20 25 30
Ser Asp Asp Gly Trp Trp Lys Gly Arg Leu Gly Thr Gly Lys Glu Gly 35 40
Leu Phe Pro Ser Asn Tyr Val Glu Glu Ile Asp
50 55
<210> 93
 <211> 57
 <212> PRT
<213> Artificial Sequence
<220>
 <223> Description of Artificial Sequence: SH3 domain
       Consensus Sequence
<400> 93
Pro Lys Val Val Ala Leu Tyr Asp Tyr Gln Ala Arg Glu Ser Asp Glu
1 15
Leu Ser Phe Lys Lys Gly Asp Ile Ile Ile Val Leu Glu Lys Ser Asp
20 25 30
Asp Gly Gly Trp Trp Lys Gly Arg Leu Lys Gly Thr Lys Glu Gly Leu 35 40 45
Ile Pro Ser Asn Tyr Val Glu Pro Val
50 55
<210> 94
<211> 91
<212> PRT
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: Fes/CIP4
       homology domain Consensus Sequence
<400> 94
Met Gly Phe Trp Ser Glu Leu Asp Asp Gly Phe Glu Ala Leu Leu Ser 1 \hspace{1cm} 5 \hspace{1cm} 15
Arg Leu Lys Asn Gly Leu Arg Leu Leu Glu Asp Leu Lys Lys Phe Met 20 25 30
Arg Glu Arg Ala Lys Ile Glu Glu Glu Tyr Ala Lys Lys Leu Gln Lys
35 40 45
Leu Ser Lys Lys Leu Arg Ala Val Arg Asp Thr Glu Ser Glu Leu Gly 50 60
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Ser Leu Arg Lys Ala Trp Glu Val Leu Leu Ser Glu Thr Asp Ala Leu 65 70 75 80

Cura 468 SEQ list 0705 Ala Lys Gln His Leu Gln Leu Ser Glu Asp Leu

<210> 95 <211> 94 <212> PRT <213> Artificial Sequence <220> homology domain Consensus Sequence <400> 95

<223> Description of Artificial Sequence: Fes/CIP4

Met Gly Phe Gly Ser Glu Leu Cys Pro Glu Gly His Lys Ala Leu Leu

Ser Arg Gln Asp Asn Glu Leu Arg Leu Leu Glu Glu Met Lys Lys Phe 20 25 30

Met Ala Glu Arg Ala Lys Ile Glu Lys Glu Tyr Ala Gly Lys Leu Gln
35 40 45

His Leu Ser Ala Gln Val Gly Lys Gly Pro Ala Thr Ala Glu Gly Glu
50 55 60

Asp Glu Leu Ser Ser Leu Lys Ser Trp Ala Val Ile Leu Ser Glu Thr
65 70 75 80

Glu Gln Gln Ser Lys Ile His Leu Gln Ile Ser Glu Asp Leu 85 90

<210> 96 <211> 230

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: Trypsin-like serine protease Consensus Sequence

Arg lle Val Gly Gly Ser Glu Ala Asn lle Gly Ser Phe Pro Trp Gln

Val Ser Leu Gln Tyr Arg Gly Gly Arg His Phe Cys Gly Gly Ser Leu 20 25 30

Ile Ser Pro Arg Trp Val Leu Thr Ala Ala His Cys Val Tyr Gly Ser
35 40 45

Ala Pro Ser Ser Ile Arg Val Arg Leu Gly Ser His Asp Leu Ser Ser 50 55 60

Gly Glu Glu Thr Gln Thr Val Lys Val Ser Lys Val Ile Val His Pro
65 70 75 80

Asn Tyr Asn Pro Ser Thr Tyr Asp Asn Asp Ile Ala Leu Leu Lys Leu 85 90 95

Ser Glu Pro Val Thr Leu Ser Asp Thr Val Arg Pro Ile Cys Leu Pro 105

Ser Ser Gly Tyr Asn Val Pro Ala Gly Thr Thr Cys Thr Val Ser Gly Trp Gly Arg Thr Ser Glu Ser Ser Gly Ser Leu Pro Asp Thr Leu Gln Ser Gly Val Asn Val Pro Iso Val Ser Asn Ala Thr Cys Arg Arg Ala Tyr 160 Ser Gly Gly Pro Ala Iso Thr Asp Asn Met Leu Cys Ala Gly Gly Leu 175 Cys Arg Arg Ala Tyr 160 Ser Gly Gly Lys Asp Ala Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Asn Asp Pro Arg Trp Val Leu Val Gly Iso Val Ser Trp Gly Ser Tyr Gly Cys Ala Arg Pro Asn Lys Pro Gly Val Tyr Thr Arg Val Ser Ser Tyr Leu Asp Trp Isle 230

<210> 97 <211> 217

<212> PRT

<213> Artificial Sequence

\$\frac{400>}{10e} \quad \text{Gly} & \text{Gly} & \text{Arg} & \text{Glu} & \text{Ala} & \text{Gln} & \text{Ala} & \text{Gly} & \text{Ser} & \text{Phe} & \text{Pro} & \text{Trp} & \text{Gln} & \text{Val} & \text{Ser} & \text{Ser} & \text{Gly} & \text{His} & \text{Phe} & \text{Cys} & \text{Gly} & \text{Gly} & \text{Ser} & \text{Leu} & \text{Ile} & \text{Ser} & \text{Ser} & \text{Ser} & \text{Gly} & \text{Ala} & \text{Ser} & \text{Gly} & \text{Gly} & \text{Gly} & \text{Ala} & \text{Ser} & \text{Ser} & \text{Ser} & \text{Val} & \text{Arg} & \text{Val} & \text{Val} & \text{Val} & \text{Val} & \text{Leu} & \text{Gly} & \text{Gly} & \text{His} & \text{Asn} & \text{Leu} & \text{Gly} & \text{Thr} & \text{Glu} & \text{Gly} & \text{Thr} & \text{Glu} & \text{Gly} & \text{Thr} & \text{Ser} & \text{Ser} & \text{Pro} & \text{Asn} & \text{Tyr} & \text{Asn} & \text{Ser} & \text{Pro} & \text{Val} & \text{Thr} & \text{Ser} & \text{Pro} & \text{Val} & \text{Thr} & \text{Ser} & \text{Pro} & \text{Val} & \text{Thr} & \text{Ser} & \text{Asp} & \text{Thr} & \text{Leu} & \text{Gly} & \text{Trp} & \text{Gly} & \text{Arg} & \text{Thr} & \text{Lys} & \text{Ser} & \text{Asp} & \text{Thr} & \text{Lys} & \text{Ser} & \text{Asp} & \text{Thr} & \text{Lys} & \text{Ser} & \text{Arg} & \text{Thr} & \text{Lys} & \text{Ser} & \text{Asp} & \text{Thr} & \text{Lys} & \text{Ser} & \text{Arg} & \text{Thr} & \text{Lys} & \text{Lys} & \text{L

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Cura 468 SEQ list 0705
Ser Arg Glu Thr Cys Arg Ser Ala Tyr Gly Gly Thr Val Thr Asp Thr 145 150 155 160
Met Ile Cys Ala Gly Ala Leu Gly Gly Lys Asp Ala Cys Gln Gly Asp
165 170 175
Ser Gly Gly Pro Leu Val Cys Ser Asp Gly Glu Leu Val Gly Ile Val
180 185 190
Ser Trp Gly Tyr Gly Cys Ala Val Gly Asn Tyr Pro Gly Val Tyr Thr
195 200 205
Arg Val Ser Arg Tyr Leu Asp Trp Ile
210 215
<210> 98
<211> 24
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: NOV5 Primer 1
<400> 98
                                                                        24
ctcccactcc tgctgcttct gact
<210> 99
<211> 25
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: NOV5 Primer 2
<400> 99
                                                                        25
aaggctgggc ctaacccagt ctcat
<210> 100
<211> 23
<212> DNA
<213> Artificial Sequence
<220>
<223> Description of Artificial Sequence: NOV7 Primer 1
<400> 100
                                                                        23
catgaactgg gcatttctgc agg
<210> 101
<211> 27
<212> DNA
<213> Artificial Sequence
<223> Description of Artificial Sequence: NOV7 Primer 2
<400> 101
                                                                        27
ttatctgctg atctcgcagg ttatgga
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<210> 102 <211> 22						
	ficial Sequence		•			
<220> <223> Desci	ription of Artificial	Sequence:	NOV8	Primer	1	
<400> 102 ctgacaggcc	ctggtgtgtg at					22
<210> 103 <211> 27 <212> DNA <213> Artif	Ficial Sequence					•
<220> <223> Descr	ription of Artificial	Sequence:	NOV8	Primer	2	
<400> 103 tcacacatgt	ttcatgtggg agttaga				•	27
<210> 104 <211> 24 <212> DNA <213> Artif	ricial Sequence					
<220> <223> Descr	ription of Artificial	Sequence:	NOV9	Primer	1	
<400> 104 gagtgagagg	tcggacagac tgtg					24
<210> 105 <211> 27 <212> DNA <213> Artif	icial Sequence					
<220> <223> Descr	ription of Artificial	Sequence:	NOV9	Primer	2	
<400> 105 actcatgcaa	cttgcttctc tcactct					27
<210> 106 <211> 24 <212> DNA <213> Artif	icial Sequence					
<220> <223> Descr 1	iption of Artificial	Sequence:	NOV10	b Prime	er	
<400> 106 cctatgagcc	tgatgctgga tgac					24
~210× 107						

<211>	25	Cura 468 SEQ list 0705	
<212>			
<220> <223>	Description of Artificial 2	Sequence: NOV10b Primer	
<400> aggac	107 tcaga ggagggagtc ctgag		25
<210> <211> <212> <213>	22		
<220> <223>	Description of Artificial	Sequence: Ag4164 Forward	
<400> gcacta	108 acaag tggaagcctt ac		22
<210> <211> <212> <213>	26		
<220> <223>	Description of Artificial	Sequence: Ag4164 Probe	
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<210> <211> <212> <213>	22		
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		Cura 468 SEQ list 0705	
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Leu Glu Glu Pro Arg Val Cys Arg Ser Phe Thr Tyr Asn Asn Lys Ser \frac{35}{40}
Lys Gln Cys Leu Leu Lys Ser Glu Ser Ser Gly Ser Leu Pro Arg Leu
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